

AECOM

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Stream Morphology (continued)

Substrate (<=>)

Bo - Boulder
Co - Cobble
Gr - Gravel
Sa - Sand
Si - Silt
Cl - Clay
MK - Muck
DT - Detritus
Other

Description

Si, Cl

Morphological Structure (%)

Pool	Riffle	Run	Flat
		100	

Notes:

high flow

Habitat

Instream Cover (%)

N/A

None	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	Undercut Bank	Other:

*Aquatic Vegetation Types Present (algae, submergent, emergent etc.)

— Could not wade in a water too turbid to
do from bank edge

Canopy Cover (% closed cover):

100-90%

☐

30-1%

☒

90-80%

☐

0%

☐

60-30%

☐

Types of Cover (% cover)

Trees

Shrubs

Man-made
structures

Grasses

Herbaceous

Other

100

Notes:

Obstructions to Fish Passage

No Obstructions

☒

Man-Made

☐

Natural

☐

Description:

Drainage Features within Study Area

Observations of Land Topography within 120 m buffer area:

flat mostly w some depression
mtns

Terrestrial features Present

Yes

☐

Terrestrial Recon Form Filled out

Yes

☐

C144

AECOM

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Other General Comments Regarding the Study Area:

- stream too deep to wade in
- channelized & uniform throughout site
- debris jams noted throughout - ~~big~~ banks - not blocking flow

Photo log

Picture #	Description	Picture #	Description
104	West Side		
105	East side		
↓			
113			

C144

AECOM

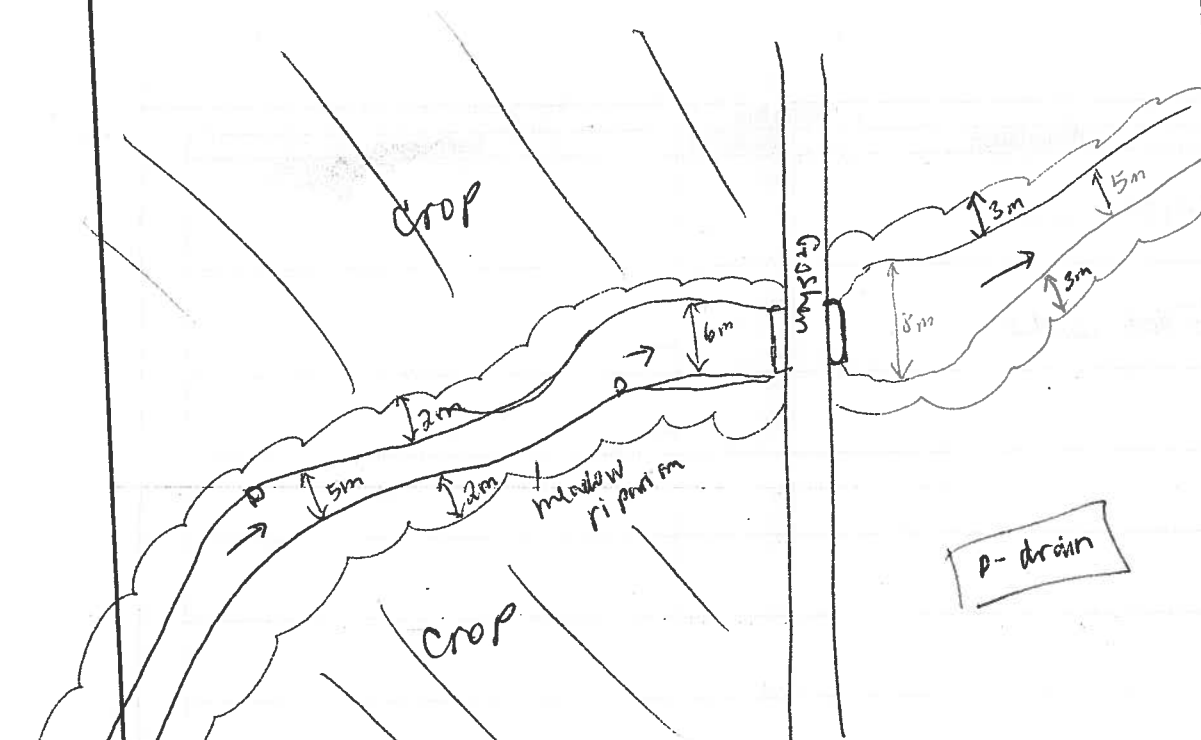
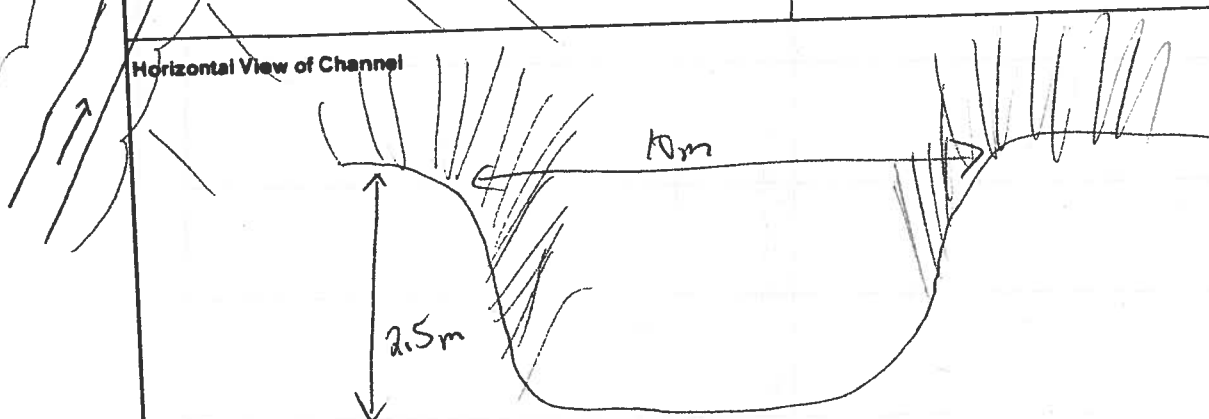
Watercourse Sketch

Study Area: Jericho Goshen Bluewater Land Parcel# GSH2016 Turbine # C144



LEGEND	
100 depth (cm)	
Bar width	
Rifle	
Run/Glide	
Pool	
Island/Bar	
Fine Substrate	
Gravel Substrate	
Cobble/Boulder	
Debris	
Catfish	
SVFV Submerg/Float Veg	
EV Emergent	
W Watercress	
Fe Iron Staining	
Eroded Bank	
Riprap / Other Stabilization	
Stream Log/Tree	
Dam/Weir	
Riparian Tree	
Seep/Spring	
Undercut Bank	
Barrier to Fish Movement	
Seasonal Barrier	
Fence line	
Curved	

Horizontal View of Channel



AECOM

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Field Crew:

Dart + Ferris

General Information

Study Area: Jericho Goshen Bluewater Land Parcel# GSM 2016 Turbine # C144
 Date: Nov 18, 2011 Start time: 9:30 End Time: 9:40

Weather Conditions:

Sunny, 0°C

Field Notes By:

Dart.

Site Location

C144

UTM Co-ordinates

Easting:

451845

Northing:

4790939

Description:

C144

Easting:

Northing:

Description:

Easting:

Northing:

Description:

Easting:

Northing:

Description:

Surrounding Landuse/Pollution Sources

 Residential ☐
 Agriculture ☒
 Forest ☐

 Meadow ☐
 Wetland ☐
 Livestock ☐

Type of Watercourse

 Intermittent ☐
 Permanent ☒
 Ephemeral ☐

 Channelized ☒
 Natural Channel ☐

Other:

Notes: (Include any inputs into the system i.e. tile drainage, seepages, overland flow)

Agriculture land on both sides of creek

In-Situ Water Quality

WT (°C):

31.2

AT (°C):

0°C

pH:

7.01

Cond (µs/cm):

754

Water Clarity:

Clear ☐Turbid ☒

Ground Water Indicators

Watercress ☐Bank Seepage ☐Iron Staining ☐None ☒Bubbling ☐Other ☐

Notes:

x No tile drains observed near road

Stream Morphology

Site Length (m):

Bank Height = 7.0 Bank ~~width~~ = 15m

Channel Dimensions

Mean Wetted Width (m):

7.5

Mean Bankfull Width (m):

8.5

Mean Wetted Depth (m):

~1.5

Mean Bankfull Depth (m):

2.0

Bank Stability:

Stable

Slightly unstable

Moderately unstable

Unstable

Left Bank

☐☒☐☐

Right Bank

☐☒☐☐

Flow Description:

Flow ~115/m flowing NE
 @ creek edge, depth = 0.40m

Notes:

Vegetated banks w grass + shrubs - some trees on top of bank

~3m buffer on north bank + 3m on south, however

@ west/south side of road there is a buffer ~15-20m wide.

AECOM

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Stream Morphology (continued)

Substrate (< = >)

Bo - Boulder
Co - Cobble
Gr - Gravel
Sa - Sand
Si - Silt
Cl - Clay
MK - Muck
DT - Detritus
Other

Description

Silt

Notes:

Morphological Structure (%)

Pool	Rifle	Run	Flat
		50	50

Habitat

Instream Cover (%)

None	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	Undercut Bank	Other:
						overhanging veg = 20%

*Aquatic Vegetation Types Present (algae, submergent, emergent etc.)

Canopy Cover (% closed cover):

100-90% ☐ 30-1% ☒
90-80% ☐ 0% ☐
80-30% ☐

Types of Cover (% cover)

Trees 20 Shrubs 50 Man-made structures _____
Grasses 30 Herbaceous _____ Other _____

Notes:

Obstructions to Fish Passage

No Obstructions ☒ Man-Made ☐
Natural ☒

Description:

Drainage Features within Study Area

Observations of Land Topography within 120 m buffer area:

land fairly flat

Terrestrial features Present

Yes

No

Terrestrial Recon Form Filled out

Yes

No

AECOM

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Other General Comments Regarding the Study Area:

Photo log

Picture #	Description	Picture #	Description
155	east from road		
156	west from road		

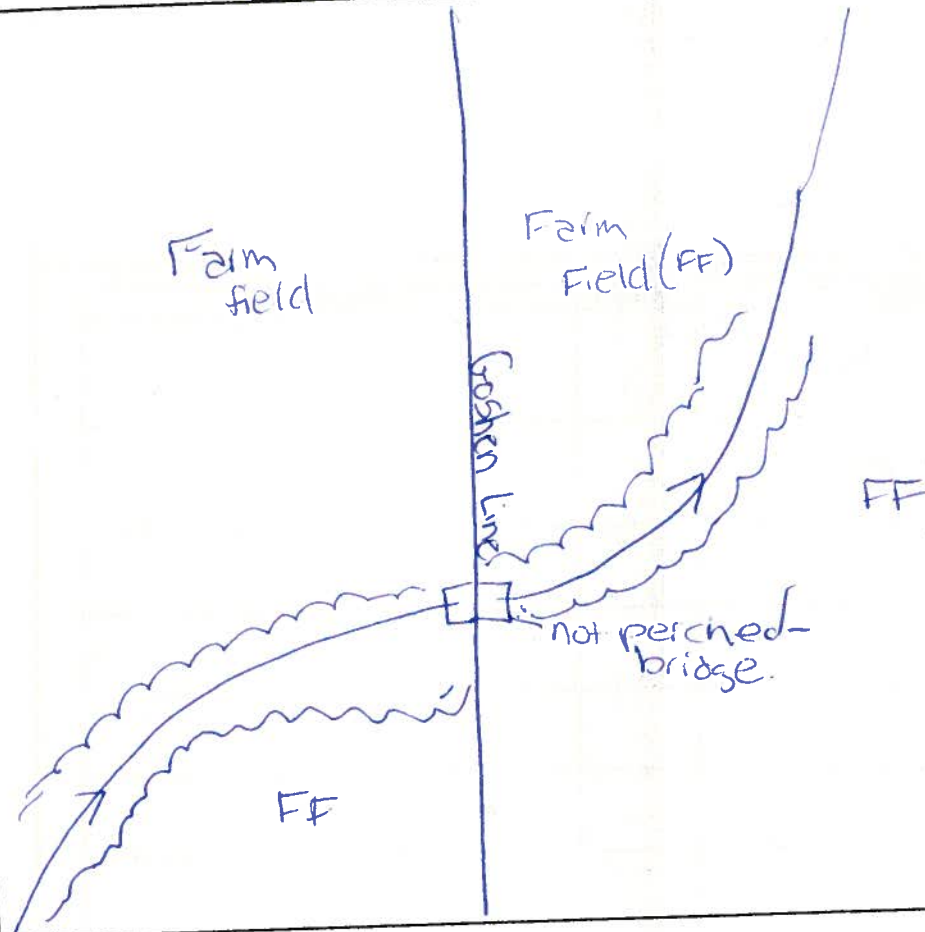
AECOM

Watercourse Sketch

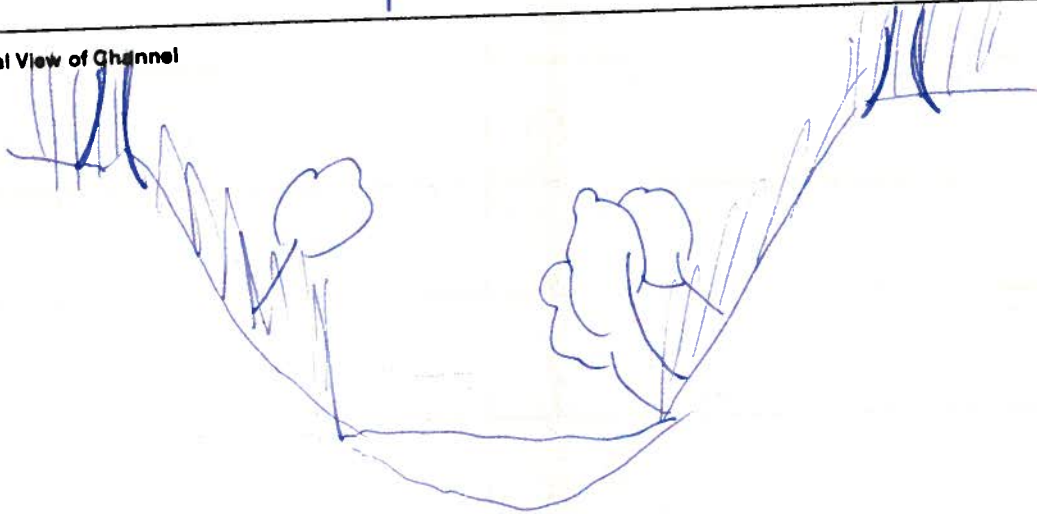
Study Area: Jericho Goshen Bluewater Land Parcel# GS42016 Turbine # C144

N ↑

LEGEND	
10d depth (cm)	
Bar width	
Rifle	
Run/Glide	
Pool	
Island/Bar	
Fine Substrate	
Gravel Substrate	
Cobble	
Boulder	
Debris	
Catfish	
SV/FV Submerge/Float Veg	
EV Emergent	
W Watercress	
Fe Iron Staining	
Eroded Bank	
Riprap / Other Stabilization	
Instream Log/Tree	
Dam/Weir	
Riparian Tree	
Seep/Spring	
Undercut Bank	
Barrier to Fish Movement	
Seasonal Barrier	
Fence line	
Culvert	



Horizontal View of Channel



Property ID: GSA 1012 (C189)

Date: Dec 22 / 2011

Property Access: Property Access to 1012

Start Time: 8:55

End Time: 9:02

Field Investigators: SA + TS

Weather: cloudy 5°C

Terrestrial Feature Present: No ☐ Yes ☐

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

Aquatic Feature Present: No ☒ Yes ☐

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

low lying area present
No water
* Roadside *

Photograph Numbers: 1-5

Property ID: GSH 1012

C189

Date: Dec 9 / 11

Property Access: Roadside Survey

Start Time: 10:35

End Time: 10:45

Field Investigators: CB, MO

Weather: Light Snow

Terrestrial Feature Present: No ☒ Yes ☐

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

→ full assessment not completed by landowner
Contact was not made at the time

Aquatic Feature Present: No ☒ Yes ☐

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

Roadside Survey

- no depression, swale or channel observed
- agricultural field, ploughed through
- barely flat

Photograph Numbers: _____

37-40

pics taken from GPS

045 3031

48 00027

AECOM		Page 1 of 4	
		Field Crew: <u>CB, TS</u>	
General Information			
Study Area: <u>Jericho</u> <u>Goshen</u> <u>Bluewater</u>	Land Parcel# <u>1034</u>	Turbine # <u>C208</u>	
Date: <u>Dec 15/11</u>	Start time: <u>13:50</u>	End Time: <u>14:15</u>	
Weather Conditions: <u>Sunny, 10°C</u>		Field Notes By: <u>CB</u>	
Site Location			
<u>Bronson Line, North of Parkwood.</u>			
UTM Co-ordinates			
Easting: <u>0448365</u>	Northing: <u>4890461</u>	Description: <u>Roadside Culvert</u>	
Easting:	Northing:	Description:	
Easting:	Northing:	Description:	
Easting:	Northing:	Description:	
Surrounding Landuse/Pollution Sources		Type of Watercourse	
Residential ☐	Meadow ☐	Intermittent ☐	Channelized ☒
Agriculture ☒	Wetland ☐	Permanent ☒	Natural Channel ☐
Forest ☐	Livestock ☐	Ephemeral ☐	
Other:			
Notes: (Include any inputs into the system i.e. tile drainage, seepages, overland flow) <u>- tile drain inputs noted coming from AS#1034 AS#1034</u>			
In-Situ Water Quality		Ground Water Indicators	
WT (°C): <u>7.9</u>	AT (°C): <u>11.0°C</u>	Watercress ☒	Bank Seepage ☐
pH: <u>7.53</u>	Cond (µs/cm): <u>612</u>	Iron Staining ☐	None ☐
Water Clarity: Clear ☐	Turbid ☒	Bubbling ☐	Other ☐
		<u>throughout site.</u>	
Notes: <u>brown</u>			
Stream Morphology			
Site Length (m):		Bank Stability:	
Channel Dimensions			
Mean Wetted Width (m): <u>2</u>	Mean Bankfull Width (m): <u>3.5</u>	Stable ☐	Slightly unstable ☒
Mean Wetted Depth (m): <u>0.3</u>	Mean Bankfull Depth (m): <u>1.45</u>	Moderately unstable ☐	Unstable ☐
		Left Bank	
		Right Bank	
Flow Description: <u>high flow, mod velocity</u>			
Notes: <u>sl. unstable banks occurring after crossing toward road.</u>			

AECOM

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Stream Morphology (continued)

Substrate (<=>)

Bo - Boulder
Co - Cobble
Gr - Gravel
Sa - Sand
Si - Silt
Cl - Clay
MK - Muck
DT - Detritus
Other

Description

si > gr > Co, bo > cl > dt

Notes:

high flow

Morphological Structure (%)

Pool	Riffle	Run	Flat
		100	

Habitat

Instream Cover (%) 50

None	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	Undercut Bank	Other:
		30	20	20	30 30	

*Aquatic Vegetation Types Present (algae, submergent, emergent etc.)

Emergent veg + watercress

Canopy Cover (% closed cover):

100-90% ☐ 30-1% ☐
90-60% ☐ 0% ☐
60-30% ☒

Types of Cover (% cover)

Trees 50 Shrubs _____ Man-made structures _____
Grasses 50 Herbaceous _____ Other _____

Notes:

Obstructions to Fish Passage

No Obstructions ☒
Natural ☐

Man-Made



Description:

perched culvert at property line (south side)

Drainage Features within Study Area

Observations of Land Topography within 120 m buffer area:

- flat

Terrestrial features Present

Yes

No

Terrestrial Recon Form Filled out

Yes

No

AECOM

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Other General Comments Regarding the Study Area:

- wildlife den observed east of crossing
- multiple tile drains flowing into channel - appears to be agri drain

Photo log

Picture #	Description	Picture #	Description
50-67			
50	West side		
51 →	East side		
57, 60	- watercress		
67	perched Culvert		

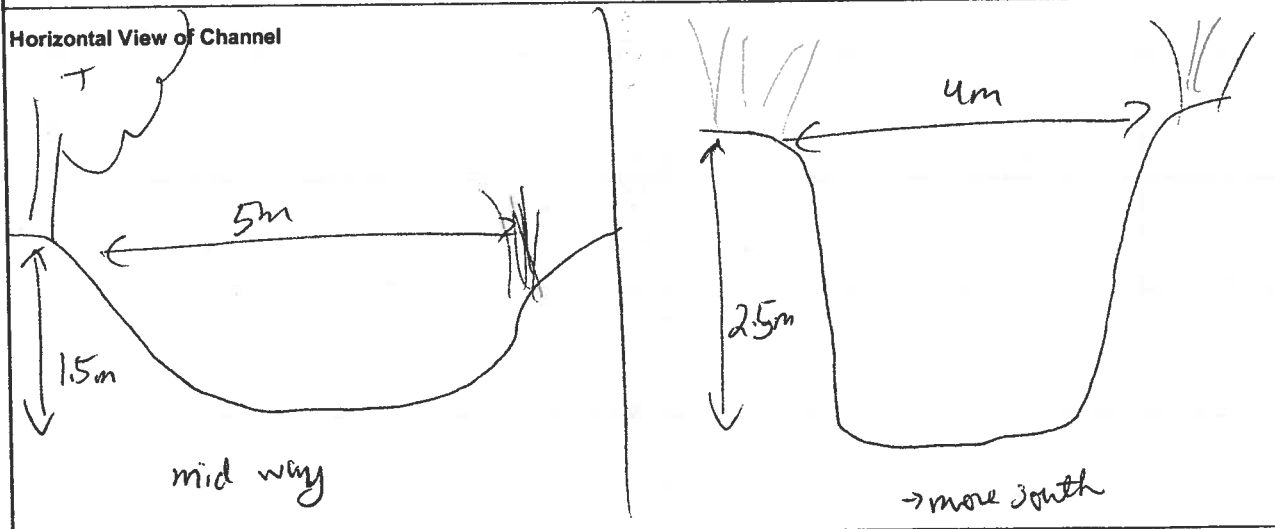
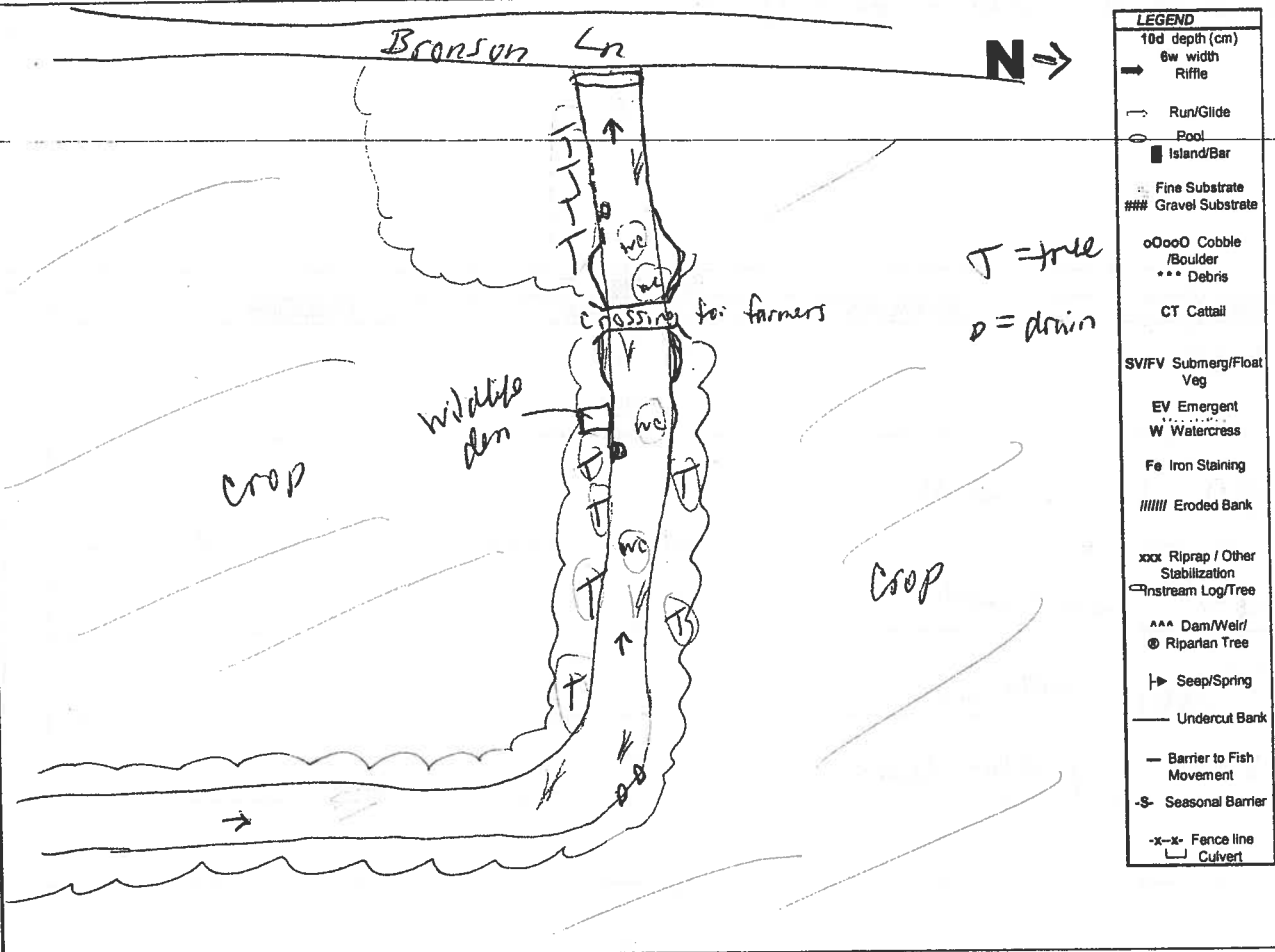
C208

AECOM

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Watercourse Sketch

Study Area: Jericho Goshen Bluewater Land Parcel# 1034 Turbine # C208



AECOM

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Field Crew:

CB, TS

General Information

Study Area: Jericho

Goshen

Bluewater

Land Parcel#

1161/1153/1154

Turbine #

C209

Date: Dec 15/11

Start time: 13:30

End Time: 13:45

Weather Conditions:

Cloudy 11°C

Field Notes By:

CB

Site Location

Bronson Line, South of McDonald.

Roadside Survey

UTM Co-ordinates

Easting: 0448311

Northing: 4800846

Description: Road Culvert.

Easting:

Northing:

Description:

Easting:

Northing:

Description:

Easting:

Northing:

Description:

Surrounding Landuse/Pollution Sources

Residential ☐Agriculture ☒Forest ☐Meadow ☐Wetland ☐Livestock ☐

Type of Watercourse

Intermittent ☐Permanent ☒Ephemeral ☐Channelized ☒Natural Channel ☐

Other:

Notes: (Include any inputs into the system i.e. tile drainage, seepages, overland flow)

no tile inputs observed.

In-Situ Water Quality

WT (°C): 8.00

AT (°C):

pH: 7.93

Cond (µs/cm): 577

Water Clarity:

Clear ☐Turbid ☒

Ground Water Indicators

Watercress ☐Iron Staining ☐Bubbling ☐Bank Seepage ☐None ☒Other ☐

Notes:

brown in color

Stream Morphology

Site Length (m):

Bank Stability:

Channel Dimensions

Mean Wetted Width (m):

1.5

Mean Bankfull Width (m):

2.5

Mean Wetted Depth (m):

n/a

Mean Bankfull Depth (m):

n/a

Stable ☐Slightly unstable ☒Moderately unstable ☐Unstable ☐

Left Bank

☐☒☐☐

Right Bank

☐☒☐☐

Flow Description:

velocity - fast, high flow

Notes:

St. unstable banks due to forced bends

AECOM

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Stream Morphology (continued)

Substrate (<=>)

Bo - Boulder
Co - Cobble
Gr - Gravel
Sa - Sand
Si - Silt
Cl - Clay
MK - Muck
DT - Detritus
Other

Description

at Culvert on west side
gr, sa > clay

Morphological Structure (%)

Pool	Riffle	Run	Flat
		100	

Notes:

high flow

Habitat

Instream Cover (%)

None	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	Undercut Bank	Other:

*Aquatic Vegetation Types Present (algae, submergent, emergent etc.)

→ could not assess - water too turbid + no access

Canopy Cover (% closed cover):

100-90% ☐ 30-1% ☒
90-80% ☐ 0% ☐
60-30% ☐

Types of Cover (% cover)

Trees 10 Shrubs _____ Man-made structures _____
Grasses 90 Herbaceous _____ Other _____

Notes:

Obstructions to Fish Passage

No Obstructions ☒ Man-Made ☐
Natural ☐

Description:

Culvert not plugged

Drainage Features within Study Area

Observations of Land Topography within 120 m buffer area:

- flat

Terrestrial features Present

Yes

No

Terrestrial Recon Form Filled out

Yes

No

C209

AECOM

Page 3 of 4

Other General Comments Regarding the Study Area:

- Roadsides Survey Conducted
- dense veg cover instream seen on west side
mod " " east side

Photo log

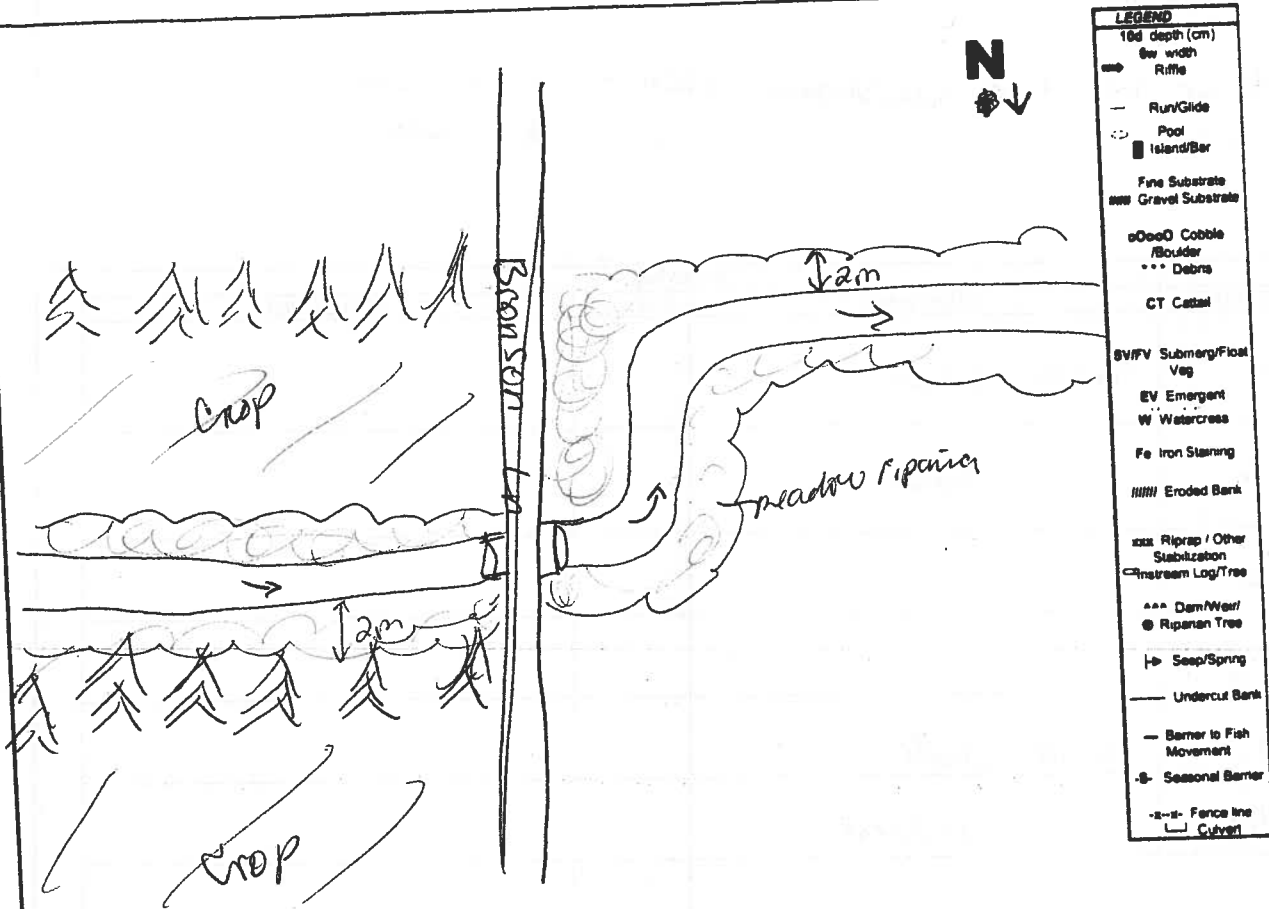
Picture #	Description	Picture #	Description
43	west culvert		
44	" source		
45	"		
46	"		
47	East side		
48	" culvert		

C209

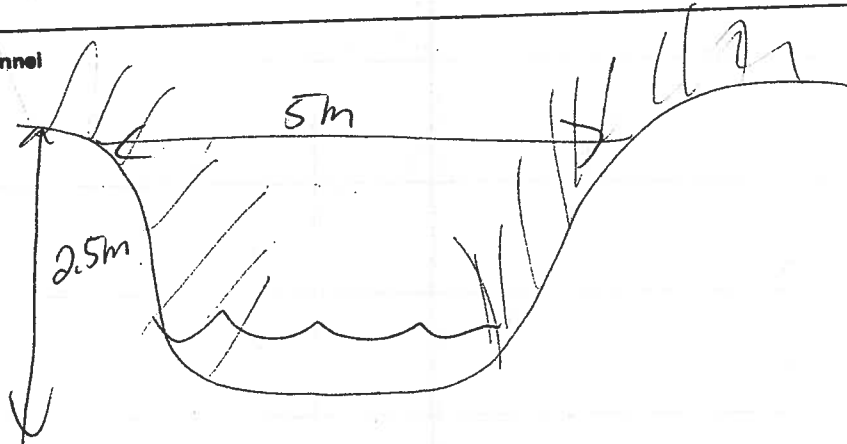
AECOM

Watercourse Sketch

Study Area: Jericho Goshen Bluewater Land Parcel# 1161/1153/1154 Turbine # C209



Horizontal View of Channel



AECOM

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Field Crew:

CB, TS

General Information

Study Area: Jericho

Goshen

Bluewater

Land Parcel#

1170, 1038

Turbine#

C210

Date: Dec 15 / 11

Start time: 10:30

End Time: 10:37

Weather Conditions:

Cloudy, 11°C

Field Notes By:

CB

Site Location

Bronson Line, north of Pepper Rd.

* See notes on next page.

UTM Co-ordinates

Easting: 0447901

Northing: 4803940

Description: culvert at road.

Easting:

Northing:

Description:

Easting:

Northing:

Description:

Easting:

Northing:

Description:

Surrounding Landuse/Pollution Sources

Residential ☐Meadow ☐Agriculture ☐Wetland ☐Forest ☐Livestock ☐Intermittent ☐Channelized ☐Permanent ☐Natural Channel ☐Ephemeral ☐

Other:

Notes: (Include any inputs into the system i.e. tile drainage, seepages, overland flow)

-tile drained land

In-Situ Water Quality

WT (°C):

AT (°C):

pH:

Cond (s/cm):

Water Clarity: Clear ☐Turbid ☐

Ground Water Indicators

Watercress ☐Bank Seepage ☐Iron Staining ☐None ☐Bubbling ☐Other ☐

Notes:

Stream Morphology

Site Length (m):

Bank Stability:

Channel Dimensions

Mean Wetted Width (m):

Mean Bankfull Width (m):

Mean Wetted Depth (m):

Mean Bankfull Depth (m):

Stable

Slightly unstable

Moderately unstable

Unstable

Left Bank

☐☐☐☐

Right Bank

☐☐☐☐

Flow Description:

no channel in field

Notes:

AECOM

Page 2 of 4

Stream Morphology (continued)

Substrate (<=>)

Bo - Boulder
Co - Cobble
Gr - Gravel
Sa - Sand
Si - Silt
Cl - Clay
MK - Muck
DT - Detritus
Other

Description

Morphological Structure (%)

Pool	Riffle	Run	Flat

Notes:

Habitat

Instream Cover (%)

None	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	Undercut Bank	Other:

*Aquatic Vegetation Types Present (algae, submergent, emergent etc.)

Canopy Cover (% closed cover):

100-90%

☐

30-1%

☐

90-60%

☐

0%

☐

60-30%

☐

Types of Cover (% cover)

Trees

Shrubs

Man-made structures

Grasses

Herbaceous

Other

Notes:

Obstructions to Fish Passage

No Obstructions

☐

Man-Made

☐

Natural

☐

Description:

Drainage Features within Study Area

Observations of Land Topography within 120 m buffer area:

Terrestrial features Present

Yes

No

Terrestrial Recon Form Filled out

Yes

No

AECOM

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Other General Comments Regarding the Study Area:

- ~~no~~ channel observed - appears to have been ploughed through. ~~no~~ Corn field has been planted
- Culvert observed at roadside and tile drain input noted as well - flowi
- ∴ Stream appears to be tile drained.
- Stream also buried on West side.

Photo log			
Picture #	Description	Picture #	Description
1	Culvert on west side of road		
2	Plussed Photo		
3	Tile drain into culvert on East side of road		
4	overview - East side		
5	" on West side		

C210

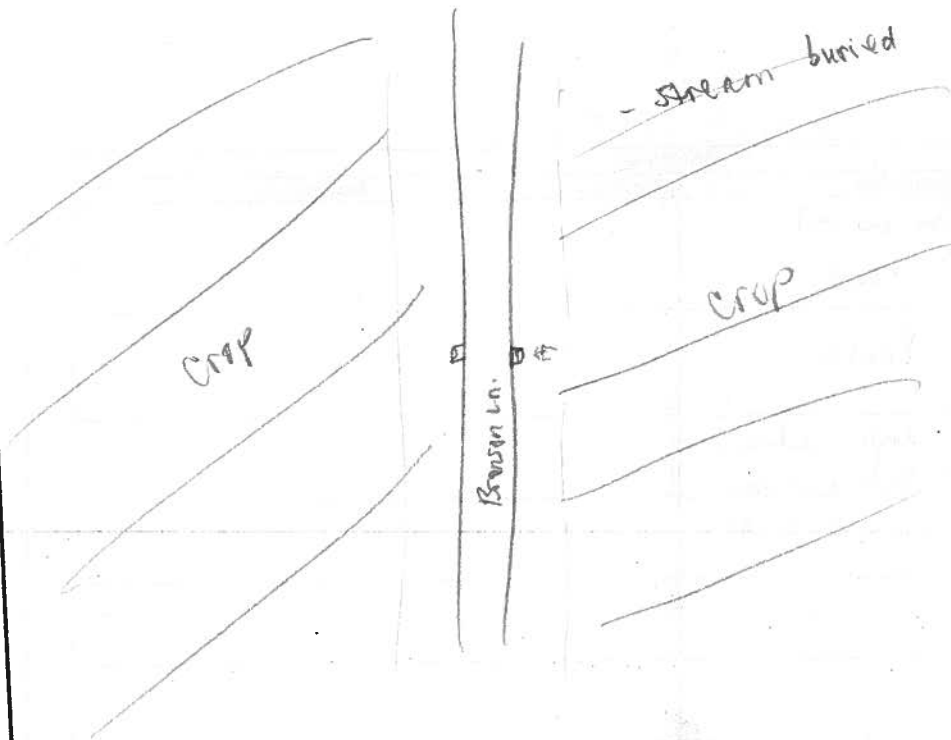
AECOM

Watercourse Sketch

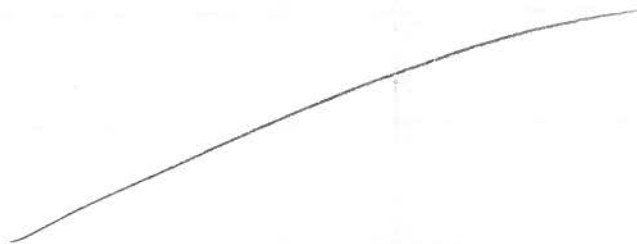
Study Area: Jericho Goshen Bluewater Land Parcel# 1170, 1038 Turbine # C210



LEGEND	
100 depth (cm)	
8m width	
Rifle	
Run/Glide	
Pool	
Island/Bar	
Fine Substrate	
Gravel Substrate	
Cobble	
Boulder	
Debris	
Cattail	
Submerg/Float Veg	
Emergent	
Watercress	
Iron Staining	
Eroded Bank	
Riprap / Other Stabilization	
Stream Log/Tree	
Dam/Weir	
Riparian Tree	
Seep/Spring	
Undercut Bank	
Barrier to Fish Movement	
Seasonal Barrier	
Fence line	
Culvert	



Horizontal View of Channel



Grashen.
 Property ID: 2138 (C211) Date: Dec 15 / 11
 Property Access: No Access Start Time: 14:25
 End Time: 14:35

Field Investigators: CB, TS Weather: Cloudy, 10°C

Terrestrial Feature Present: No ☒ Yes ☐

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

Aquatic Feature Present: No ☒ Yes ☐

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

Roadside survey.

Crop agricultural field → feature ploughed
through

Photograph Numbers: 68, 69

Babylon Line
 South of
 Dashwood.

Property ID: GSH 1362 (A1414) Date: Jan 13, 2012

(C212)

Property Access: yes

Start Time: 10:15

End Time: 10:25

Field Investigators: CB Weather: Snow, -5°C

Terrestrial Feature Present: No ☒ Yes ☐

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

Aquatic Feature Present: No ☒ Yes ☐

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

- field ploughed through

Photograph Numbers: _____

Property ID: GSH 1461 (A115) Date: Jan 13, 2012
C213
 Property Access: yes Start Time: 11:00
 End Time: 11:10

Field Investigators: CR Weather: Snow, -5°C

Terrestrial Feature Present: No ☒ Yes ☐

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

Aquatic Feature Present: No ☒ Yes ☐

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

- grassed depression most likely
used for access.

Photograph Numbers: _____

Property ID: GSH 2028 (AH 20) Date: Jan 13, 2012

(C214)

Property Access: yes Start Time: 13:00

End Time: 13:15

Field Investigators: CB Weather: Snow, -5°C

Terrestrial Feature Present: No ☒ Yes ☐

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

Aquatic Feature Present: No ☒ Yes ☐

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

- field ploughed through

Photograph Numbers: _____

Property ID: GSH 1033 (AH22) Date: Jan 13, 2012

(C215)

Property Access: yes Start Time: 14:00

End Time: 14:15

Field Investigators: CB Weather: snow, -5°C

Terrestrial Feature Present: No ☒ Yes ☐

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

Aquatic Feature Present: No ☒ Yes ☐

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

- no feature
- field ploughed through

Photograph Numbers: _____

Property ID: GSH 1526 (A1+23) Date: Jan 13, 2012
C216

Property Access: yes Start Time: 15:00
 End Time: 15:15

Field Investigators: CB Weather: Snow, -7°C

Terrestrial Feature Present: No ☒ Yes ☐

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

Aquatic Feature Present: No ☒ Yes ☐

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

- field ploughed through.

Photograph Numbers: _____

Property ID: GS47053 (Alt 19) C217 Date: Jan 13, 2012

Property Access: yes Start Time: 11:30
End Time: 11:40

Field Investigators: C. Boros Weather: Snow, -5°C

Terrestrial Feature Present: No ☐ Yes ☐

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

Aquatic Feature Present: No ☐ Yes ☐

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

Photograph Numbers: _____

Water Bodies Assessment Field Collection Form

AECOM		Page 1 of 4	
General Information			
Study Area:	Jericho <u>Goshen</u> Bluewater	Land Parcel# <u>GSH1541</u>	Site ID: <u>001</u>
Date: <u>April 18/12</u>	Start time: <u>16:30</u>	End Time: <u>17:00</u>	
Weather Conditions: <u>Sunny 15°C</u>		Field Crew: <u>C. Boros, J. L. Harris</u>	
		Field Notes By: <u>C. Boros</u>	
Site Location			
<u>Grand Bend Line, Crediton Rd Corner</u>			
UTM Co-ordinates (continue on page 3 if necessary)			
Easting: <u>0441082</u>	Northing: <u>4792114</u>	Description: <u>West end - access bridge</u>	
Easting:	Northing:	Description:	
Easting:	Northing:	Description:	
Easting:	Northing:	Description:	
Surrounding Landuse		Type of Watercourse	
Residential ☒	Meadow ☐	Intermittent ☐	Channelized ☒
Agriculture ☐	Wetland ☐	Permanent ☒	Natural Channel ☐
Forest ☐	Livestock ☐	Ephemeral ☐	
Other ☐			
Description: <u>road adjacent</u>		Description: <u>appears to be recently dug</u>	
Notes: (include any inputs into the system i.e. tile drainage, seepages, overland flow) <u>tile drain</u>			
Is any portion of the water body underground or not as mapped? <u>Y / N</u>			
If Yes describe:			
GPS Coordinate: Easting - <u> </u> Northing - <u> </u> Description - <u> </u>			
Description of Land Topography Surrounding Water Body (rolling hills, sloping towards water body) <u>flat</u>			
In-Situ Water Quality		Ground Water and Seepage Indicators	
WT (°C): <u>8.1</u>	AT (°C): <u>15</u>	Watercress ☐ Bank Seepage ☐ Iron Staining ☐ None ☒ Bubbling ☐ <u> </u> ☐ Other ☐ <u> </u>	
pH: <u>7.54</u>	Cond (µs/cm): <u>1776</u>		
D.O. (mg/L) <u>12.5</u>			
Water Clarity: <u>Clear</u> ☒ Turbid ☐			
Water Colour: <u>clear</u>		Details:	
Notes:			

Water Bodies Assessment Field Collection Form

Stream Morphology																				
Site Length (m): <u>200m</u>				Bank Stability:																
Channel Dimensions				<table border="1" style="width:100%; text-align: center;"> <tr> <td></td> <td>Stable</td> <td>Slightly unstable</td> <td>Moderately unstable</td> <td>Unstable</td> </tr> <tr> <td>Left Bank</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Right Bank</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </table>			Stable	Slightly unstable	Moderately unstable	Unstable	Left Bank	☒	☐	☐	☐	Right Bank	☒	☐	☐	☐
	Stable	Slightly unstable	Moderately unstable	Unstable																
Left Bank	☒	☐	☐	☐																
Right Bank	☒	☐	☐	☐																
Mean Wetted Width (m): <u>0.75</u>	Mean Wetted Depth (m): <u>0.05</u>		Description: <u>may have been recently dug</u>																	
Mean Bankfull Width (m): <u>1.5</u>	Mean Bankfull Depth (m): <u>0.6</u>																			
Mean Top of Bank Width (m): <u>5m</u>	Mean Top of Bank Depth (m): <u>3m</u>																			
Flow Description: (high or low flow conditions, stagnant, etc) <u>v. low flow, stagnant in some areas</u>																				
Habitat																				
Substrate (<=>)			Morphological Structure (%)																	
Bo - Boulder Co - Cobble Gr - Gravel Sa - Sand Si - Silt Cl - Clay MK - Muck DT - Detritus <u>gr, sa >> cl, si</u>			<table border="1" style="width:100%; text-align: center;"> <tr> <td>Pool</td> <td>Riffle</td> <td>Run</td> <td>Flat</td> </tr> <tr> <td></td> <td></td> <td></td> <td><u>100</u></td> </tr> </table>			Pool	Riffle	Run	Flat				<u>100</u>							
			Pool	Riffle	Run	Flat														
			<u>100</u>																	
Notes:																				
Instream Cover (%)																				
Other	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	None	Undercut Banks														
<u>/</u>	<u>/</u>	<u>/</u>	<u>10</u>	<u>20</u>	<u>/</u>	Average Depth: <u>/</u> (% Cover)														
Note: Low = 0 - 30%; Moderate = 30 - 75%; High = 75 - 100%																				
*Aquatic Vegetation Species Present (algae, submergent, emergent etc.) <u>algae > emergent veg - grasses</u> <u>blooms</u>																				
Canopy Cover (% closed cover):				Types of Cover (% cover)																
100-90%	☐	30-1%	☐	Trees <u>100</u>	Shrubs															
90-60%	☐	0%	☐	Grasses	Herbaceous															
60-30%	☒				Other															
Note: Low = 0 - 30%; Moderate = 30 - 60%; High = 60 - 100%																				
Notes: (vegetation species, types of structures) <u>Pine, Cedar, Oak, maple</u>																				
Riparian Vegetation																				
Width of riparian vegetation: <u>3m</u>																				
Description of vegetation community surrounding 30 m from watercourse: <u>trees, grass</u>																				
Obstructions to Fish Passage																				
No Obstructions	☒	Man-Made	☐	Natural	☐	Low Flow Barrier	☐													
Description of Barrier:																				
Height of Barrier (m)			GPS Coordinates:																	

Water Bodies Assessment Field Collection Form

AECOM

APR 18/12 Date: GSH 1541

Land Parcel/Site ID: D01

Page 3 of 4

Other General Comments Regarding the Study Area:

- Watercourse is a straight channelized feature, low canopy and instream cover.

Additional UTM Coordinates:

Photo Log			
Picture #	Description	Picture #	Description
1	overview - looking east to Gravel Barred Line		
2	- looking west		
3-	→ looking east		

Water Bodies Assessment Field Collection Form

AECOM

Page 4 of 4

Study Area:

Jericho

Goshen

Bluewater

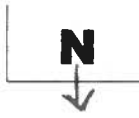
Land Parcel# GSH 1541

Site ID

001

watercourse does not cross Grand Bend Line

Grand Bend Line



LEGEND	
10d depth (cm)	6w width
→	Run/Glide
○	Pool
■	Island/Bar
■	Fine Substrate
###	Gravel Substrate
o o o o	Cobble/Boulder
...	Debris
CT	Cattail
SW/FV	Submerg/Float Veg
EV	Emergent Vegetation
W	Watercress
Fe	Iron Staining
	Eroded Bank
xxx	Riprap / Other Stabilization
CD	Instream Log/Tree
AAA	Dam/Weir/ Obstruction
⊗	Riparian Tree
↳	Seep/Spring
—	Undercut Bank
—	Barrier to Fish Movement
-S-	Seasonal Barrier
-x-x-	Fence line
□	Culvert

a = algae

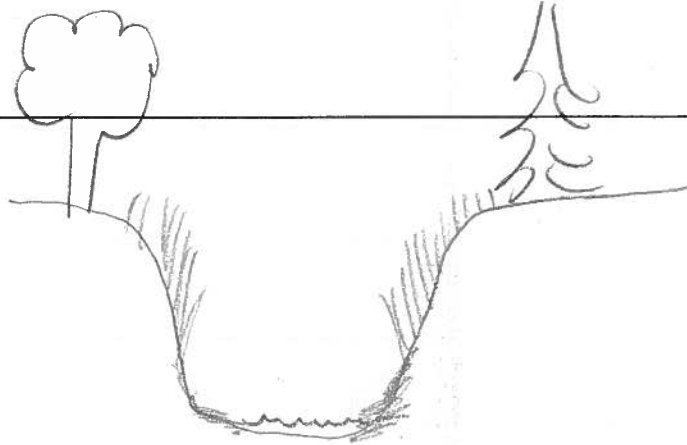
bridge

50m same as study area

3m

Crediton

Horizontal View of Channel



Initial QA/QC By: BMS

Date: 04/19/2012

Technical QA/QC By: Santen

Date: May 3/12

Water Bodies Assessment Field Collection Form

AECOM

Page 1 of 4

General Information

Study Area: Jericho Goshen Bluewater	Land Parcel#: G-511066/1074	Site ID: D04
Date: April 18/12	Start time: 14:25	End Time: 15:53
Weather Conditions: Sunny, 12°C	Field Crew: C. Boros, S. Lohos	
	Field Notes By: C. Boros	

Site Location

South Rd, west of Bronson, east of Blackbush Ln

Utl, 00-ordinates (continue on page 3 if necessary)

Easting: 0448230	Northing: 4791034	Description: start - at dam
Easting: 0447884	Northing: 4791130	Description: wq station
Easting: 0447668	Northing: 4791192	Description: end Blackbush Ln
Easting:	Northing:	Description:

Surrounding Landuse		Type of Watercourse	
Residential ☐	Meadow ☐	Intermittent ☐	Channelized ☒
Agriculture ☒	Wetland ☐	Permanent ☒	Natural Channel ☐
Forest ☐	Livestock ☐	Ephemeral ☐	
Other ☐			
Description: old corn field		Description: no natural meander	

Notes: (include any inputs into the system i.e. tile drainage, seepages, overland flow)

yes tile drains present + flowing

Is any portion of the water body underground or not as mapped? Y / N

If Yes describe:

GPS Coordinate: Easting - Northing - Description -

Description of Land Topography Surrounding Water Body (rolling hills, sloping towards water body)

flat

In-Situ Water Quality

WT (°C): 14.5	AT (°C): 15°C
pH: 8.52	Cond (µs/cm): 312
D.O. (mg/L): 12.7	
Water Clarity: Clear ☒	Turbid ☐

Water Colour: none

Notes:

Ground Water and Seepage Indicators

Watercress ☐	Bank Seepage ☐
Iron Staining ☐	None ☒
Bubbling ☐	
Other ☐	

Details:

Water Bodies Assessment Field Collection Form

Stream Morphology																								
Site Length (m): 700m					Bank Stability:																			
Channel Dimensions					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th></th> <th>Stable</th> <th>Slightly unstable</th> <th>Moderately unstable</th> <th>Unstable</th> </tr> <tr> <td>Left Bank</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Right Bank</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> </table>						Stable	Slightly unstable	Moderately unstable	Unstable	Left Bank	☐	☒	☐	☐	Right Bank	☐	☒	☐	☐
	Stable	Slightly unstable	Moderately unstable	Unstable																				
Left Bank	☐	☒	☐	☐																				
Right Bank	☐	☒	☐	☐																				
Mean Wetted Width (m): 2.5		Mean Wetted Depth (m): 0.15		Mean Wetted Width (m): 0.5		Mean Wetted Depth (m): 0.15																		
Mean Bankfull Width (m): 3		Mean Bankfull Depth (m): 0.6		Mean Bankfull Width (m): 3		Mean Bankfull Depth (m): 0.6																		
Mean Top of Bank Width (m): 6		Mean Top of Bank Depth (m): 2.5		Mean Top of Bank Width (m): 6		Mean Top of Bank Depth (m): 2.5																		
Flow Description: (high or low flow conditions, stagnant, etc)																								
slow flow in run areas																								
Description: erosion may be a result of human impacts, soil type + not necessarily natural meander																								
Habitat																								
Substrate (<=>)					Morphological Structure (%)																			
Bo - Boulder Co - Cobble Gr - Gravel Sa - Sand Si - Silt Cl - Clay MK - Muck DT - Detritus					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Pool</th> <th>Riffle</th> <th>Run</th> <th>Flat</th> </tr> <tr> <td>30</td> <td>5</td> <td></td> <td>65</td> </tr> </table>					Pool	Riffle	Run	Flat	30	5		65							
Pool	Riffle	Run	Flat																					
30	5		65																					
Description: <1>> sa, si > gr, co > bo					Notes: but no natural meander																			
Instream Cover (%) 80																								
Other	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	None	Undercut Banks																		
plant debris																								
20	20	15	5	40		Average Depth: (% Cover) 10																		
Note: Low = 0 - 30%; Moderate = 30 - 75%; High = 75 - 100%																								
*Aquatic Vegetation Species Present (algae, submergent, emergent etc.)																								
submergent algae																								
Canopy Cover (% closed cover):					Types of Cover (% cover)																			
100-90%	☐	30-1%	☐	Trees	10	Shrubs	80	Man-made structures																
90-60%	☒	0%	☐	Grasses	10	Herbaceous		Other																
60-30%	☐																							
Note: Low = 0 - 30%; Moderate = 30 - 60%; High = 60 - 100%																								
Notes: (vegetation species, types of structures)																								
dogwood, alder, hawthorn																								
Riparian Vegetation																								
Width of riparian vegetation: < 0.5 m																								
Description of vegetation community surrounding 30 m from watercourse: grass.																								
Obstructions to Fish Passage																								
No Obstructions	☐	Man-Made	☐	Natural	☒	Low Flow Barrier	☐																	
Description of Barrier: woody + veg jam -> may not be permanent																								
Height of Barrier (m)					GPS Coordinates:																			

Water Bodies Assessment Field Collection Form

AECOM

Date: April 18 / 12

Land Parcel/Site ID:

GSH 166/1074
D04

Page 3 of 4

Other General Comments Regarding the Study Area:

- pond behind dam ~ 250m x 50m, turbid green water, water flowing over weir
- fish observed
- tadpole + frog observed.
- pool areas appear to occur after tile drain input

Additional UTM Coordinates:

Photo log			
Picture #	Description	Picture #	Description
1-2	dam, + lake on North Side		
3	South of dam to road		
4	dam		
5	inlet to pond.		
6	North side of culvert		
7-12	roadside		
13	branch north		
14-17	↓		
18-20	veg build up dam		
21-27	West branch		
28-31	last 4 pics Blackbush		

Culvert

Water Bodies Assessment Field Collection Form

AECOM

Page 4 of 4

Study Area:

Jericho

Goshen

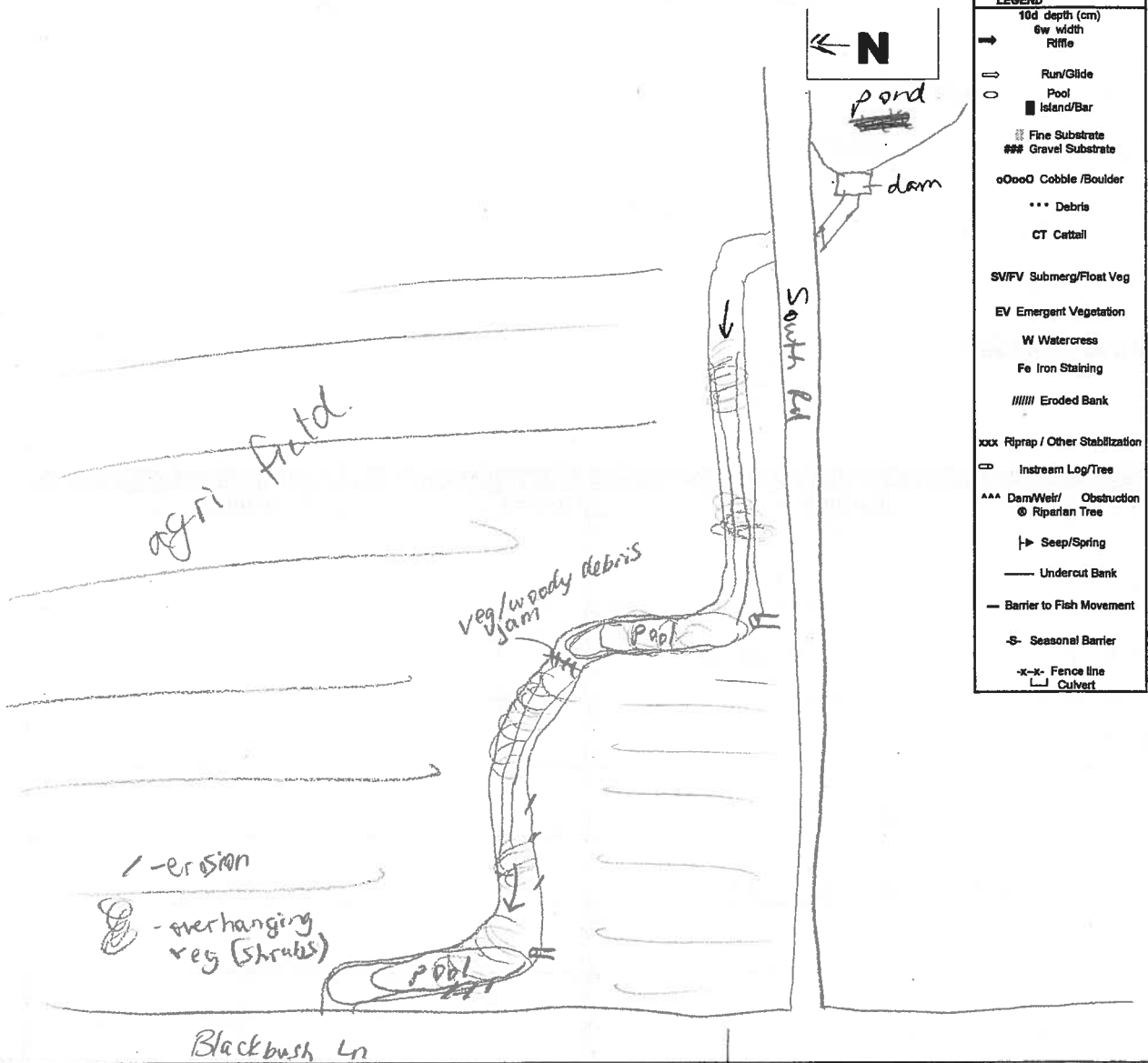
Bluewater

Land Parcel#

6511066/024

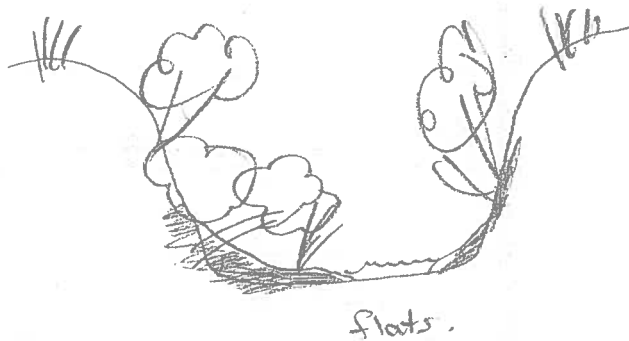
Site ID

004



LEGEND	
10d depth (cm)	
6w width	
Riffle	
Run/Glide	
Pool	
Island/Bar	
Fine Substrate	
Gravel Substrate	
Cobble/Boulder	
Debris	
CT Cattail	
SV/FV Submerg/Float Veg	
EV Emergent Vegetation	
W Watercress	
Fe Iron Staining	
Eroded Bank	
Riprap / Other Stabilization	
Instream Log/Trees	
Dam/Weir Obstruction	
Riparian Tree	
Seep/Spring	
Undercut Bank	
Barrier to Fish Movement	
Seasonal Barrier	
Fence line	
Culvert	

Horizontal View of Channel



Initial QA/QC By: AMS

Date: 04/19/2012

Technical QA/QC By: S. L. L. L.

Date: May 3/12

Water Bodies Assessment Field Collection Form

AECOM		Page 1 of 4	
General Information			
Study Area: Jericho <u>Goshen</u> Bluewater		Land Parcel# <u>1606</u> Site ID: <u>DOS</u>	
Date: <u>May 11/12</u>		Start time: <u>10:10</u> End Time: <u>10:20</u>	
Weather Conditions: <u>Sunny, 9°C</u>		Field Crew: <u>C. Boros, J. Epp</u> Field Notes By: <u>C. Boros</u>	
Site Location			
<u>Corbett Line north of Creditor Rd</u> <u>ASA</u> <u>roadside</u>			
UTM Co-ordinates (continue on page 3 if necessary)			
Easting: <u>443135</u>		Northing: <u>4792437</u> Description: <u>DOS-GSH/1606</u>	
Easting: _____		Northing: _____ Description: _____	
Easting: _____		Northing: _____ Description: _____	
Easting: _____		Northing: _____ Description: _____	
Surrounding Landuse		Type of Watercourse	
Residential ☐ Agriculture ☐ Forest ☒ Other _____ Description: <u>deciduous</u>		Intermittent ☐ Permanent ☐ Ephemeral ☐ Channelized ☐ Natural Channel ☐ Description: <u>Water at time of investigation - channel cattail choked.</u>	
Notes: (include any inputs into the system i.e. tile drainage, seepages, overland flow) <u>roadside ditch- no connection to watercourse on Southside of road</u> Is any portion of the water body underground or not as mapped? Y / <u>N</u> If Yes describe: _____			
GPS Coordinate: Easting - _____		Northing - _____ Description - _____	
Description of Land Topography Surrounding Water Body (rolling hills, sloping towards water body)			
In-Situ Water Quality		Ground Water and Seepage Indicators	
WT (°C): _____ AT (°C): _____ pH: _____ Cond (s/cm): _____ D.O. (mg/L) _____ Water Clarity: Clear ☐ Turbid ☐ Water Colour: <u>none taken</u> Notes: _____		Watercress ☐ Bank Seepage ☐ Iron Staining ☐ None ☒ Bubbling ☐ _____ Other ☐ _____ Details: <u>none observed from road</u>	

Water Bodies Assessment Field Collection Form

Stream Morphology																				
Site Length (m): <u>~ 20m</u>			Bank Stability:																	
Channel Dimensions			<table border="1" style="width: 100%; text-align: center;"> <tr> <td></td> <td>Stable</td> <td>Slightly unstable</td> <td>Moderately unstable</td> <td>Unstable</td> </tr> <tr> <td>Left Bank</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Right Bank</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </table>				Stable	Slightly unstable	Moderately unstable	Unstable	Left Bank	☒	☐	☐	☐	Right Bank	☒	☐	☐	☐
	Stable	Slightly unstable	Moderately unstable	Unstable																
Left Bank	☒	☐	☐	☐																
Right Bank	☒	☐	☐	☐																
Mean Wetted Width (m): <u>0.5</u>	Mean Wetted Depth (m): <u>< 0.20</u>		Description:																	
Mean Bankfull Width (m): <u>—</u>	Mean Bankfull Depth (m): <u>—</u>																			
Mean Top of Bank Width (m): <u>—</u>	Mean Top of Bank Depth (m): <u>—</u>																			
Flow Description: (high or low flow conditions, stagnant, etc) <u>low flow conditions → could not see flow</u>																				
Habitat																				
Substrate (< = >)			Morphological Structure (%)																	
Bo - Boulder Co - Cobble Gr - Gravel Sa - Sand Si - Silt Cl - Clay MK - Muck DT - Detritus			<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Pool</td> <td>Riffle</td> <td>Run</td> <td>Flat</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>			Pool	Riffle	Run	Flat											
Pool	Riffle	Run	Flat																	
Description: <u>could not see</u>			Notes: <u>choked @ cattails</u>																	
Instream Cover (%)																				
Other	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	None	Undercut Banks														
				<u>95</u>		Average Depth: (% Cover)														
Note: Low = 0 - 30%; Moderate = 30 - 75%; High = 75 - 100%																				
*Aquatic Vegetation Species Present (algae, submergent, emergent etc.) <u>Cattails & grasses</u>																				
Canopy Cover (% closed cover):				Types of Cover (% cover)																
100-90% ☐	30-1% ☒	Trees _____ Shrubs _____ Man-made structures _____																		
90-60% ☐	0% ☐	Grasses _____ Herbaceous _____ Other _____																		
60-30% ☐																				
Note: Low = 0 - 30%; Moderate = 30 - 60%; High = 60 - 100%																				
Notes: (vegetation species, types of structures)																				
Riparian Vegetation																				
Width and Description of riparian vegetation:																				
LB <u>cultural meadow</u>																				
RB <u> </u>																				
Overhanging Vegetation Present Y / (N) <u> </u> % Overhanging Vegetation: <u> </u>																				
Description of Overhanging Vegetation: <u> </u>																				
Obstructions to Fish Passage																				
None Observed ☐	Man-Made ☐	Natural ☐	Low Flow Barrier ☒																	
Description of Barrier: <u>low water level & choked channel</u>																				
Height of Barrier (m) _____ GPS Coordinates: _____																				

Water Bodies Assessment Field Collection Form

AECOM

Date: May 11/12

Land Parcel/Site ID:

DOS
GSH1606

Page 3 of 4

Other General Comments Regarding the Study Area:

(SN)
-channel comes down through forest runs
along roadside for 10m then heads
back into forest in NW direction
-cattail Choked

Additional UTM Coordinates:

Photo log

Picture #	Description	Picture #	Description
56-58			

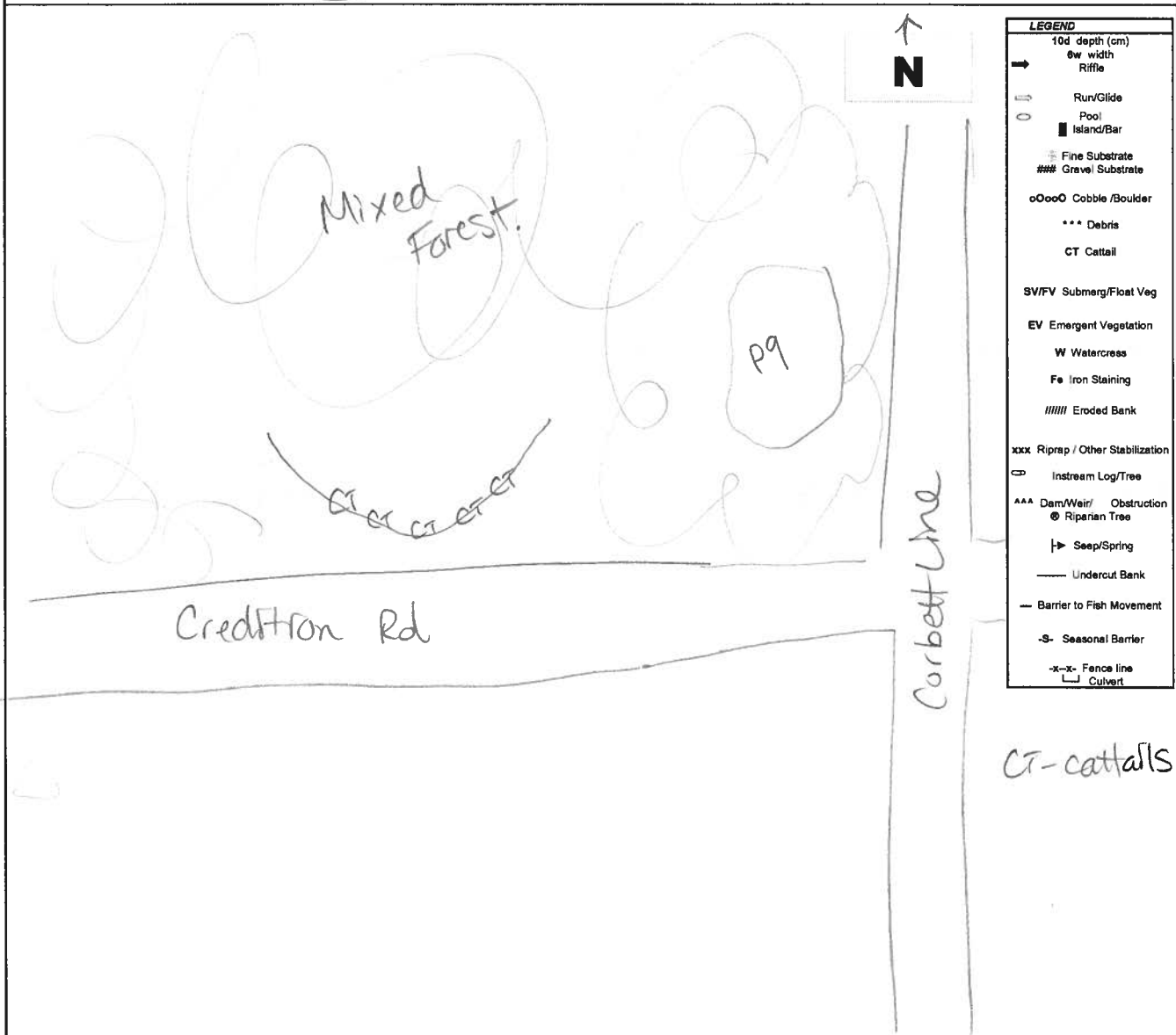
Water Bodies Assessment Field Collection Form

AECOM

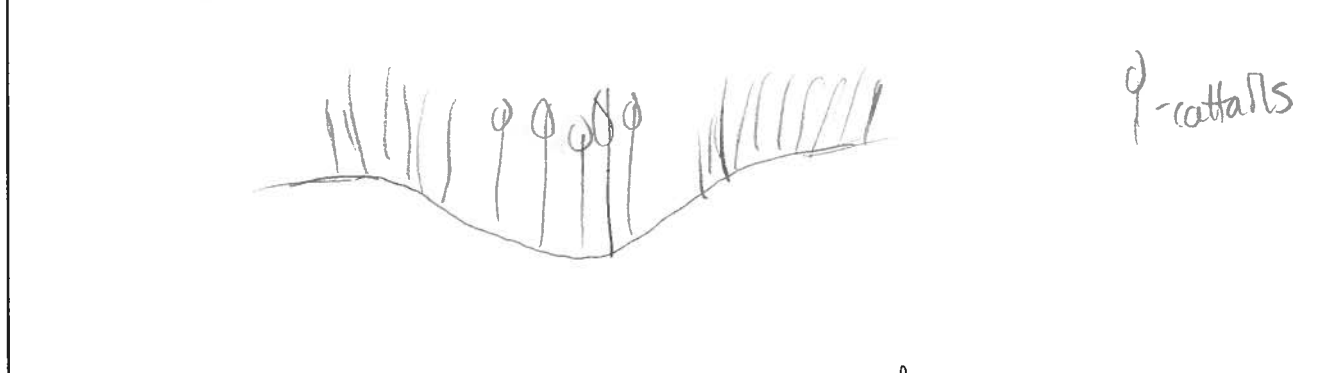
Page 4 of 4

Watercourse Sketch

Study Area: Jericho Goshen Bluewater Land Parcel# 1606 Site ID D05



Horizontal View of Channel



Initial QA/QC By: C. Bentley

Date: Aug. 2, 2012 Technical QA/QC By: [Signature] Date: Aug 2/12

Water Bodies Assessment Field Collection Form

Page 1 of 4

AECOM

General Information

Study Area: Jericho	<u>Goshen</u>	Bluewater	Land Parcel# <u>2160/2161</u>	Site ID: <u>D07</u>
Date: <u>May 10 / 12</u>	Start time: <u>10:25</u>	End Time: <u>12:10</u>		
Weather Conditions: <u>Sunny, 10°C</u>		Field Crew: <u>C. Boros, J. EPP</u>		
		Field Notes By: <u>C. Boros</u>		

Site Location

Goshen Line, South of Crediton Rd.

UTM Co-ordinates (continue on page 3 if necessary)

Easting: <u>451772</u>	Northing: <u>4793223</u>	Description: <u>D07 Start</u>
Easting: <u>452310</u>	Northing: <u>4793497</u>	Description: <u>D07 end</u>
Easting:	Northing:	Description:
Easting:	Northing:	Description:

Surrounding Landuse		Type of Watercourse	
Residential ☐	Meadow ☐	Intermittent ☐	Channelized ☒
Agriculture ☒	Wetland ☐	Permanent ☒	Natural Channel ☐
Forest ☐	Livestock ☐	Ephemeral ☐	
Other			
Description: <u>Crop fields</u>		Description: <u>Starting to naturalize</u>	

Notes: (Include any inputs into the system i.e. tile drainage, seepages, overland flow)

tile drains observed - one flowing

Is any portion of the water body underground or not as mapped? Y / N
If Yes describe:

GPS Coordinate: Easting - Northing - Description -

Description of Land Topography Surrounding Water Body (rolling hills, sloping towards water body)

flat

In-Situ Water Quality

WT (°C): <u>15°C</u>	AT (°C): <u>/</u>
pH: <u>/</u>	Cond (s/cm): <u>/</u>
D.O. (mg/L): <u>/</u>	
Water Clarity: Clear ☒ Turbid ☐	
Water Colour: <u>n/a</u>	
Notes: <u>wg meter not working</u>	

Ground Water and Seepage Indicators

Watercress ☐	Bank Seepage ☐
Iron Staining ☐	None ☒
Bubbling ☐	
Other ☐	
Details:	

Water Bodies Assessment Field Collection Form

Stream Morphology																				
Site Length (m): ~400 m				Bank Stability:																
Channel Dimensions				<table border="1" style="width: 100%; text-align: center;"> <tr> <th></th> <th>Stable</th> <th>Slightly unstable</th> <th>Moderately unstable</th> <th>Unstable</th> </tr> <tr> <td>Left Bank</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Right Bank</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> </table>			Stable	Slightly unstable	Moderately unstable	Unstable	Left Bank	☐	☒	☐	☐	Right Bank	☐	☒	☐	☐
	Stable	Slightly unstable	Moderately unstable	Unstable																
Left Bank	☐	☒	☐	☐																
Right Bank	☐	☒	☐	☐																
Mean Wetted Width (m): 1	Mean Wetted Depth (m): 0.19		Description: slumping and some erosion Banks well vegetated																	
Mean Bankfull Width (m): 2	Mean Bankfull Depth (m): 0.5																			
Mean Top of Bank Width (m): 5	Mean Top of Bank Depth (m): 2																			
Flow Description: (high or low flow conditions, stagnant, etc) moderate flow																				
Habitat																				
Substrate (< = >)			Morphological Structure (%)																	
Bo - Boulder Co - Cobble Gr - Gravel Sa - Sand Si - Silt Cl - Clay MK - Muck DT - Detritus			<table border="1" style="width: 100%; text-align: center;"> <tr> <th>Pool</th> <th>Riffle</th> <th>Run</th> <th>Flat</th> </tr> <tr> <td>18</td> <td>2</td> <td>10</td> <td>70</td> </tr> </table>			Pool	Riffle	Run	Flat	18	2	10	70							
Pool	Riffle	Run	Flat																	
18	2	10	70																	
Description: gr = sa > si = cl = mk > bo			Notes: slight meandering																	
Instream Cover (%) 70																				
Other Small woody debris	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	None	Undercut Banks														
4	1	2	/	60	/	Average Depth: 0.10 m (% Cover) 3														
Note: Low = 0 - 30%; Moderate = 30 - 75%; High = 75 - 100%																				
*Aquatic Vegetation Species Present (algae, submergent, emergent etc.)																				
filamentous algae, attached algae >>> grasses																				
Canopy Cover (% closed cover):				Types of Cover (% cover)																
100-90% ☐	30-1% ☒		Trees 50 Shrubs 50 Man-made structures																	
90-60% ☐	0% ☐		Grasses _____ Herbaceous _____ Other _____																	
60-30% ☐																				
Note: Low = 0 - 30%; Moderate = 30 - 60%; High = 60 - 100%																				
Notes: (vegetation species, types of structures)																				
willow																				
Riparian Vegetation																				
Width of riparian vegetation: 2.5 m - garlic mustard, grasses, herbaceous																				
Description of vegetation community surrounding 30 m from watercourse:																				
Crop agri fields																				
Obstructions to Fish Passage																				
No Obstructions ☐	Man-Made ☐	Natural ☐	Low Flow Barrier ☒																	
Description of Barrier: debris jam may cause barrier in low flow																				
Height of Barrier (m)				GPS Coordinates: 007 barrier 0451811 4793228																

Water Bodies Assessment Field Collection Form

AECOM

Date: May 10/12

Land Parcel/Site ID: D07
2160/2161

Page 3 of 4

Other General Comments Regarding the Study Area:

- schools of fish observed (minnow/cyprinids), darters observed at T-convergence
↳ fish noted up + down of potential low flow barrier
- Heron observed, frog observed
- watercourse is a channelized feature that is naturalizing, v.v. slight meandering, instream cover moderate (algae), canopy cover v. low, substrate gr, sa

Additional UTM Coordinates:

Photo log			
Picture #	Description	Picture #	Description
1-2	overview of convergence	17	tile drain
3	looking up/s (N) at convergence	18	overview-channel
4	Looking down/s (S) at convergence	19	- past study area
5	study area stream		
6-	substrate		
7	debris jam		
8	substrate		
9-12	Channel overview		
13	transition		
14	just before bend		
15	after bend bend		
16	just after bend		

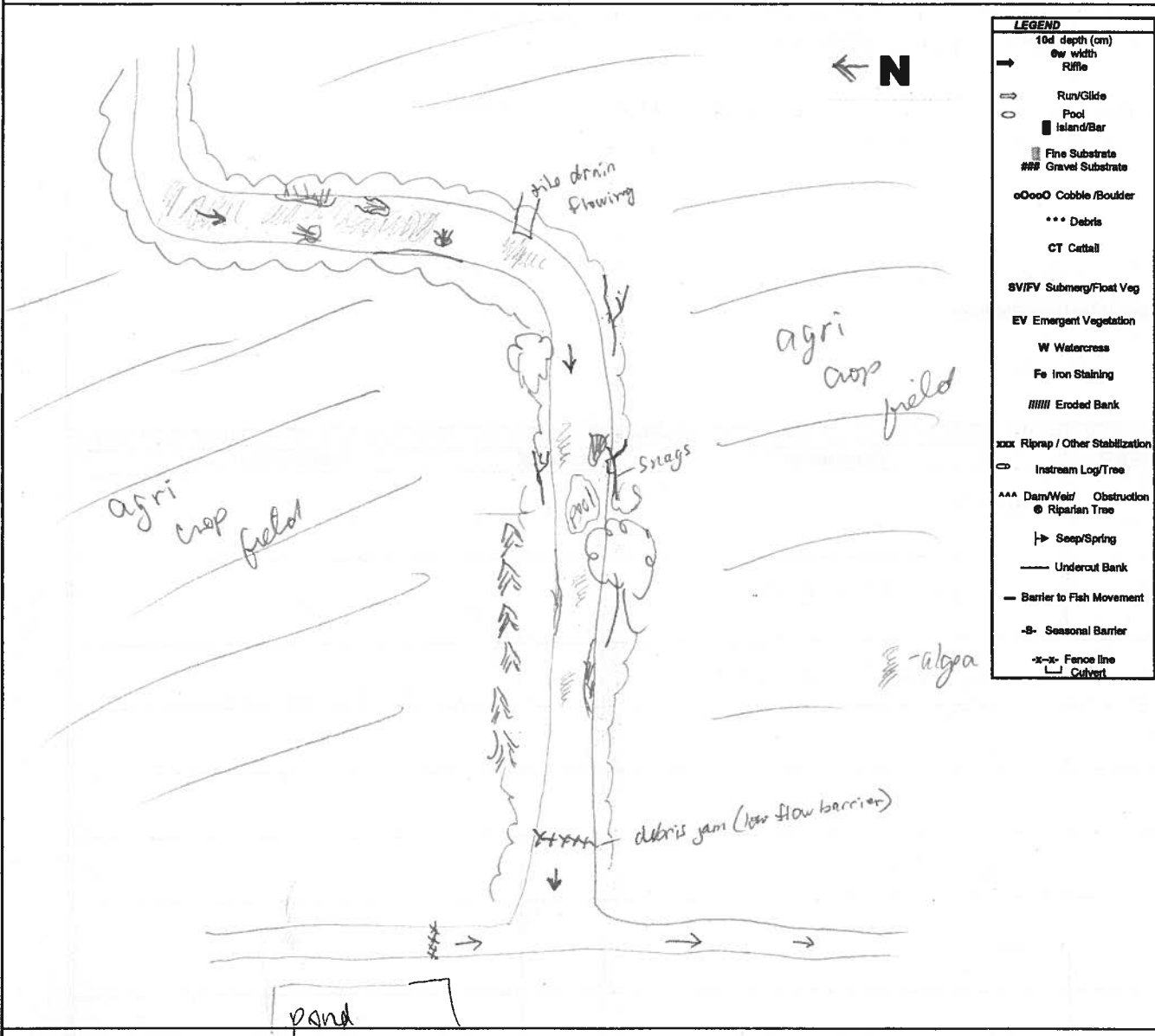
Water Bodies Assessment Field Collection Form

AECOM

Page 4 of 4

Watercourse Sketch

Study Area: Jericho Goshen Bluewater Land Parcel# 2160/2161 Site ID D57



Horizontal View of Channel



Initial QA/QC By: L Bentley

Date: May 10, 2012

Technical QA/QC By: Saitkin Date: June 11/12

Property ID: 1557 (C200) DO9 Date: Dec 22, 2011

Property Access: No Access Roadside ASA Start Time: 11:24
End Time: 17:30

Field Investigators: SA + TS Weather: Partly cloudy 5°C

Terrestrial Feature Present: No ☐ Yes ☒

Provide brief description of observations (i.e. hedgerow, treerow, woodlot, valleylands, deciduous vs coniferous, crop)

Photograph Numbers: _____

Aquatic Feature Present: No ☐ Yes ☒

Provide brief description (i.e. drainage ditch, watercourse, intermittent, permanent)

Permanent watercourse NW 1.5m B/W - 2.0m
- culvert - choked with cattail
Agriculture on sides
1m wide 20cm deep - drainage - channelized

Photograph Numbers: #20

Water Bodies Assessment Field Collection Form

AECOM		Page 1 of 4	
General Information			
Study Area: Jericho <u>Goshen</u>	Bluewater	Land Parcel# <u>1559</u>	Site ID: <u>D11-East side</u>
Date: <u>July 12/12</u>	Start time: <u>10:35</u>	End Time: <u>10:47</u>	
Weather Conditions: <u>Sunny, hot</u>		Field Crew: <u>SA, GF</u>	
		Field Notes By: <u>SA</u>	
Site Location			
<u>located east from mollard line (Roadside survey)</u>			
UTM Co-ordinates (continue on page 3 if necessary)			
Easting: <u>438890</u>	Northing: <u>4789336</u>	Description: <u>at culvert</u>	
Easting:	Northing:	Description:	
Easting:	Northing:	Description:	
Easting:	Northing:	Description:	
Surrounding Landuse		Type of Watercourse	
Residential ☐	Meadow ☐	Intermittent ☐	Channelized ☒
Agriculture ☒	Wetland ☐	Permanent ☒	Natural Channel ☐
Forest ☐	Livestock ☐	Ephemeral ☐	
Other ☐			
Description: <u>Corn on both</u>		Description: <u>channel is starting to naturalize</u>	
Notes: (include any inputs into the system i.e. tile drainage, seepages, overland flow) <u>-collects water from roadside ditch</u>			
Is any portion of the water body underground or not as mapped? <u>Y/N</u>			
If Yes describe:			
GPS Coordinate: Easting - Northing - Description-			
Description of Land Topography Surrounding Water Body (rolling hills, sloping towards water body)			
<u>flat</u>			
In-Situ Water Quality		Ground Water and Seepage Indicators	
WT (°C): <u>16.43</u>	AT (°C): <u>29°C</u>	Watercress ☐ Bank Seepage ☐ Iron Staining ☐ None ☒ Bubbling ☐ Other ☐	
pH: <u>7.91</u>	Cond (µs/cm): <u>558</u>		
D.O. (mg/L): <u>4.85</u>			
Water Clarity: Clear ☒ Turbid ☒			
Water Colour: <u>brown - light</u>		Details: <u>none observed</u>	
Notes: <u>Slight turbidity, wq taken at culvert, algae mats</u>			

Water Bodies Assessment Field Collection Form

Stream Morphology																				
Site Length (m): <u>~ 20 m</u>			Bank Stability:																	
Channel Dimensions			<table border="1" style="width: 100%; text-align: center;"> <tr> <td></td> <td>Stable</td> <td>Slightly unstable</td> <td>Moderately unstable</td> <td>Unstable</td> </tr> <tr> <td>Left Bank</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Right Bank</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </table>				Stable	Slightly unstable	Moderately unstable	Unstable	Left Bank	☒	☐	☐	☐	Right Bank	☒	☐	☐	☐
	Stable	Slightly unstable	Moderately unstable	Unstable																
Left Bank	☒	☐	☐	☐																
Right Bank	☒	☐	☐	☐																
Mean Wetted Width (m): <u>2.5</u>	Mean Wetted Depth (m): <u>0.26</u>	Description: <u>well vegetated</u>																		
Mean Bankfull Width (m): <u>5.0</u>	Mean Bankfull Depth (m): <u>1.1</u>																			
Mean Top of Bank Width (m): <u>10.</u>	Mean Top of Bank Depth (m): <u>2.7</u>	Flow Description: (high or low flow conditions, stagnant, etc) <u>low flow conditions - water barely moving</u>																		
Habitat																				
Substrate (< = >)		Morphological Structure (%)																		
Bo - Boulder Co - Cobble Gr - Gravel Sa - Sand Si - Silt Cl - Clay MK - Muck DT - Detritus <u>Si</u>		<table border="1" style="width: 100%; text-align: center;"> <tr> <th>Pool</th> <th>Riffle</th> <th>Run</th> <th>Flat</th> </tr> <tr> <td></td> <td></td> <td></td> <td><u>100</u></td> </tr> </table>				Pool	Riffle	Run	Flat				<u>100</u>							
		Pool	Riffle	Run	Flat															
			<u>100</u>																	
		Notes: <u>barely moving</u>																		
Instream Cover (%)																				
Other	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	None	Undercut Banks														
	<u>20</u>			<u>50</u>		Average Depth: (% Cover)														
Note: Low = 0 - 30%; Moderate = 30 - 75%; High = 75 - 100%																				
*Aquatic Vegetation Species Present (algae, submergent, emergent etc.) <u>algae, water plantain</u>																				
Canopy Cover (% closed cover):																				
100-90%	☐	30-1%	☐	Types of Cover (% cover)																
90-60%	☐	0%	☐	Trees <u>30</u>	Shrubs <u>40</u>	Man-made structures														
60-30%	☒			Grasses <u>20</u>	Herbaceous <u>10</u>	Other														
Note: Low = 0 - 30%; Moderate = 30 - 60%; High = 60 - 100%																				
Notes: (vegetation species, types of structures) <u>apple trees, willow trees</u>																				
Riparian Vegetation																				
Width and Description of riparian vegetation: LB - <u>5m</u>			RB - <u>5m</u>																	
Overhanging Vegetation Present Y / N <u>(N)</u>			% Overhanging Vegetation:																	
Description of Overhanging Vegetation:																				
Obstructions to Fish Passage																				
None Observed	☐	Man-Made	☐	Natural	☐	Low Flow Barrier ☒														
Description of Barrier:																				
Height of Barrier (m)			GPS Coordinates:																	

Water Bodies Assessment Field Collection Form

AECOM

Date: July 12/12

Land Parcel/Site ID: GSH1559
D11

Page 3 of 4

Other General Comments Regarding the Study Area:

- channel to low flow
- algal mats - hard to see to bottom
- small woody debris
- flows through large CSP

Additional UTM Coordinates:

Photo log

Picture #	Description	Picture #	Description
10-12	view of D11 on east side		

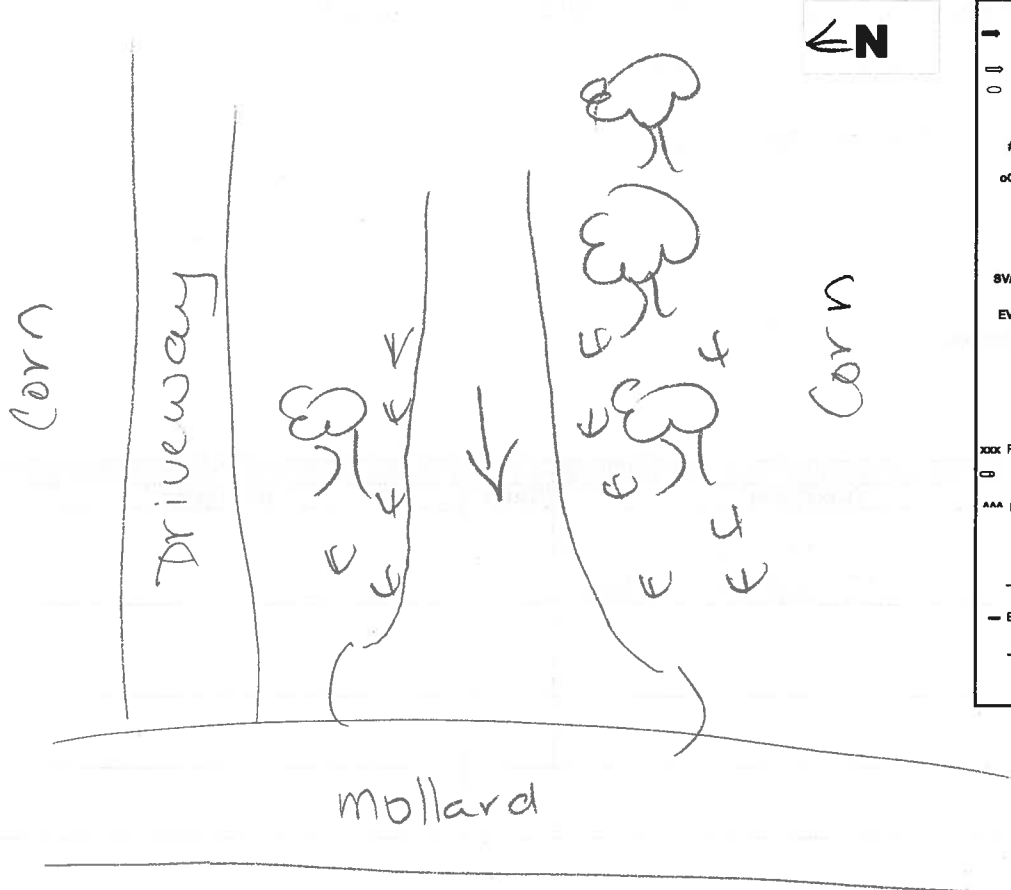
Water Bodies Assessment Field Collection Form

AECOM

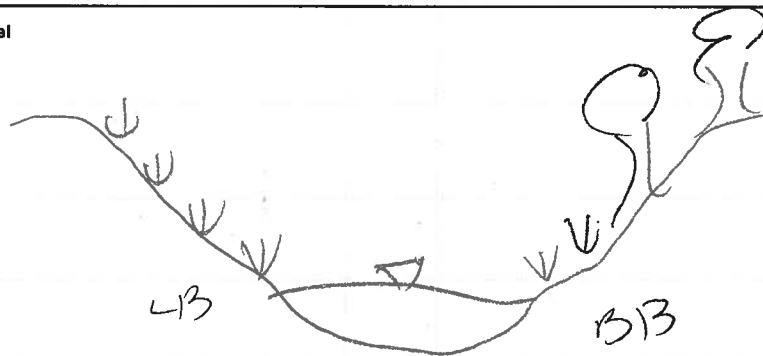
Page 4 of 4

Watercourse Sketch

Study Area: Jericho Goshen Bluewater Land Parcel# 1559 Site ID D11



Horizontal View of Channel



Initial QA/QC By: L. Bentley

Date: Aug 2, 2012

Technical QA/QC By: Anna Date: 2nd Aug 2012

Water Bodies Assessment Field Collection Form

AECOM				Page 1 of 4	
General Information					
Study Area: Jericho <u>Goshen</u>		Bluewater	Land Parcel# <u>GSH2174</u>	Site ID: <u>D11</u>	
Date: <u>April 18/12</u>		Start time: <u>10:10</u>		End Time: <u>11:05</u>	
Weather Conditions: <u>Sunny, 10°C</u>			Field Crew: <u>C. Boros, S. Lahres</u>		
			Field Notes By: <u>C. Boros</u>		
Site Location					
<u>Mollard Line, North of Greenaway</u>					
UTM Co-ordinates (continue on page 3 if necessary)					
Easting: <u>0738872</u>		Northing: <u>4789342</u>		Description: <u>advent at road</u>	
Easting:		Northing:		Description:	
Easting:		Northing:		Description:	
Easting:		Northing:		Description:	
Surrounding Landuses			Type of Watercourse		
Residential ☐	Meadow ☐	Intermittent ☐ Channelized ☒ Agriculture ☒ Wetland ☐ Forest ☐ Livestock ☐ Other ☐			
Description:			Description: <u>- some slight meandering</u>		
Notes: (include any inputs into the system i.e. tile drainage, seepages, overland flow) <u>none observed</u>					
Is any portion of the water body underground or not as mapped? <u>Y / N</u>					
If Yes describe:					
GPS Coordinate: Easting - <u> </u> Northing - <u> </u> Description - <u> </u>					
Description of Land Topography Surrounding Water Body (rolling hills, sloping towards water body) <u>flat</u>					
In-Site Water Quality			Ground Water and Seepage Indicators		
WT (°C): <u>7.22</u>		AT (°C): <u>N</u>		Watercress ☐ Bank Seepage ☐ Iron Staining ☐ None ☒ Bubbling ☐ <u> </u> ☐ Other ☒	
pH: <u>8.4</u>		Cond (µs/cm): <u>362</u>			
D.O. (mg/L) <u>15.78</u>					
Water Clarity: Clear ☒ Turbid ☐					
Water Colour: <u>n/a</u>		Details: <u>Water speedwell observed</u>			
Notes: <u>areas of organic film</u>					

Water Bodies Assessment Field Collection Form

Stream Morphology																				
Site Length (m): 250m				Bank Stability:																
Channel Dimensions				<table border="1" style="width:100%; text-align: center;"> <tr> <th></th> <th>Stable</th> <th>Slightly unstable</th> <th>Moderately unstable</th> <th>Unstable</th> </tr> <tr> <td>Left Bank</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Right Bank</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </table>			Stable	Slightly unstable	Moderately unstable	Unstable	Left Bank	☒	☐	☐	☐	Right Bank	☒	☐	☐	☐
	Stable	Slightly unstable	Moderately unstable	Unstable																
Left Bank	☒	☐	☐	☐																
Right Bank	☒	☐	☐	☐																
Mean Wetted Width (m): 0.7	Mean Wetted Depth (m): 0.15		Description: well veg.																	
Mean Bankfull Width (m): 1.2	Mean Bankfull Depth (m): 0.4																			
Mean Top of Bank Width (m): 3.5	Mean Top of Bank Depth (m): 1.8																			
Flow Description: (high or low flow conditions, stagnant, etc)																				
slow, low flow																				
Habitat																				
Substrate (<=>)		Description		Morphological Structure (%)																
Bo - Boulder Co - Cobble Gr - Gravel Sa - Sand Si - Silt Cl - Clay MK - Muck DT - Detritus		Substrate almost entirely covered by algae Si, Sa, Cl → covered by algae		<table border="1" style="width:100%; text-align: center;"> <tr> <th>Pool</th> <th>Riffle</th> <th>Run</th> <th>Flat</th> </tr> <tr> <td>10</td> <td></td> <td></td> <td>90</td> </tr> </table>		Pool	Riffle	Run	Flat	10			90							
Pool	Riffle	Run	Flat																	
10			90																	
				Notes: average depths of pools 0.25m																
Instream Cover (%) 80																				
Other	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	None															
	20	/	/	50	/															
					Undercut Banks															
					Average Depth: 0.10m															
					(% Cover) 10															
Note: Low = 0 - 30%; Moderate = 30 - 75%; High = 75 - 100%																				
*Aquatic Vegetation Species Present (algae, submergent, emergent etc.)																				
algae attached to substrate > algae blooms > grasses + emergent veg.																				
Canopy Cover (% closed cover):			Types of Cover (% cover)																	
100-90%	☐	30-1%	☐	Trees 80	Shrubs 10															
90-60%	☒	0%	☐	Grasses 10	Herbaceous															
60-30%	☐				Man-made structures															
			Other																	
Note: Low = 0 - 30%; Moderate = 30 - 60%; High = 60 - 100%																				
Notes: (vegetation species, types of structures)																				
Young maple, poplars - no leaves on trees																				
Riparian Vegetation																				
Width of riparian vegetation: Left = 1m Right = 3m																				
Description of vegetation community surrounding 30 m from watercourse:																				
trees w grasses.																				
Obstructions to Fish Passage																				
No Obstructions	☒	Man-Made	☐	Natural	☐															
		Low Flow Barrier	☐																	
Description of Barrier:																				
Height of Barrier (m)			GPS Coordinates:																	

Water Bodies Assessment Field Collection Form

AECOM

Date: April 18 / 12

Land Parcel/Site ID:

SSH 2174
D11

Page 3 of 4

Other General Comments Regarding the Study Area:

- Rock pile observed in riparian area 5m x 5m x 2m
0438672, 4789390

- schools of cyprinids

- wood duck observed

Watercourse has slight meander, substrate soft +

Additional UTM Coordinates: covered in algae -> resulting in high instream cover.

Photo log			
Picture #	Description	Picture #	Description
1, 2	overview		
3	from culvert		
4	culvert		
5	fish		
6, 7	stream		
8	substrate		
9	stream		
10	Rock pile 0438672 4789390		
11	west end		
12-13	aquatic veg-		

Water Bodies Assessment Field Collection Form

AECOM

Page 4 of 4

Watercourse Sketch

Study Area:

Jericho

Goshen

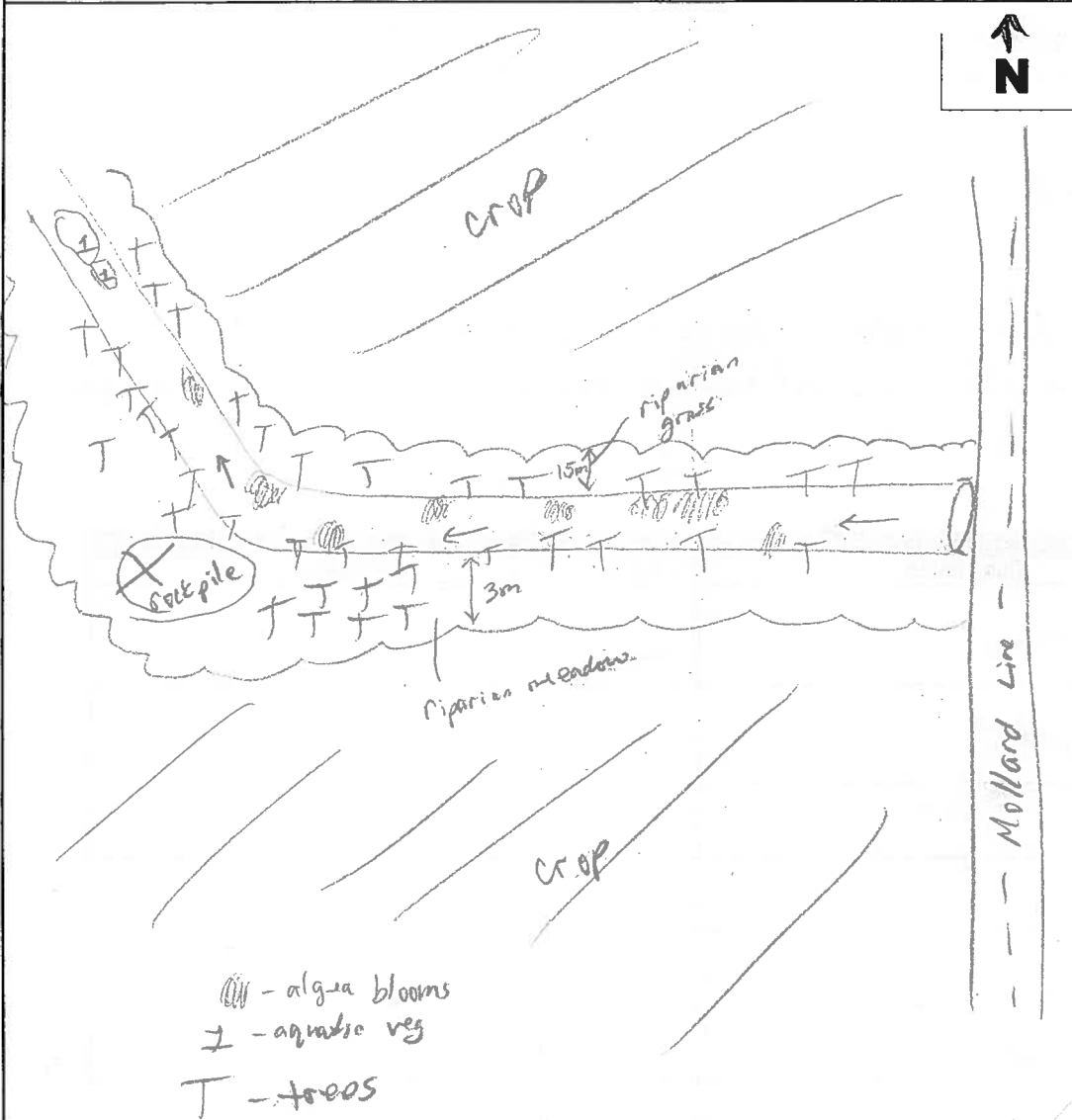
Bluewater

Land Parcel#

65H 2174

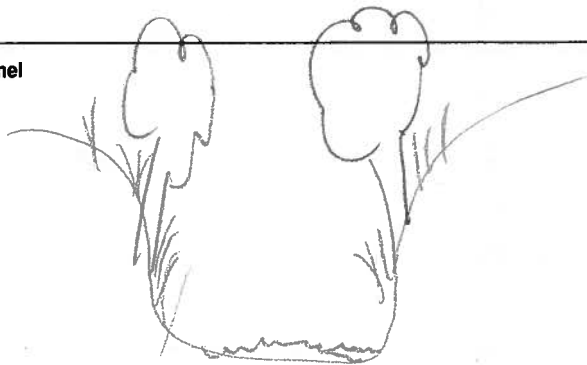
Site ID

011



LEGEND	
10d depth (cm)	
Sw width	
Riffle	
Run/Glide	
Pool	
Island/Bar	
Fine Substrate	
Gravel Substrate	
Cobble/Boulder	
Debris	
Cattail	
Submerg/Float Veg	
Emergent Vegetation	
Watercress	
Iron Staining	
Eroded Bank	
Riprap / Other Stabilization	
Instream Log/Tree	
Dam/Weir/ Obstruction	
Riparian Tree	
Seep/Spring	
Undercut Bank	
Barrier to Fish Movement	
Seasonal Barrier	
Fence line	
Culvert	

Horizontal View of Channel



Initial QA/QC By: AMS

Date: Apr 19/12

Technical QA/QC By: S. Walker

Date: May 3/12

Water Bodies Assessment Field Collection Form

Page 1 of 4

AECOM

General Information

Study Area: Jericho Goshen Bluewater Land Parcel# 2046/2126 Site ID: 012
 Date: May 10/12 Start time: 8:43 End Time: 10:00
 Weather Conditions: Sunny, 11°C Field Crew: C. Boros, J. EPP
 Field Notes By: C. Boros

Site Location

Babylon Rd, South of Kirtan

Roadside Survey
GSH 2126

UTM Co-ordinates (continue on page 3 if necessary)

Easting: 453333 Northing: 4795234 Description: 012 start
 Easting: 453618 Northing: 4795441 Description: 012 end
 Easting: Northing: Description:
 Easting: Northing: Description:

Surrounding Landuse

Residential ☐ Meadow ☐
 Agriculture ☒ Wetland ☐
 Forest ☐ Livestock ☐
 Other ☐

Description: agri crop fields

Type of Watercourse

Intermittent ☐ Channelized ☒
 Permanent ☒ Natural Channel ☐
 Ephemeral ☐

Description: starting to naturalize

Notes: (Include any inputs into the system i.e. tile drainage, seepages, overland flow)

tile drains observed - a couple flowing (low flow)

Is any portion of the water body underground or not as mapped? Y (N)

If Yes describe:

GPS Coordinate Easting -

Northing -

Description -

Description of Land Topography Surrounding Water Body (rolling hills, sloping towards water body)

flat

In-Situ Water Quality

WT (°C): AT (°C):
 pH: Cond (s/cm):
 D.O. (mg/L)
 Water Clarity: Clear ☒ Turbid ☐
 Water Colour:

Notes: w/g meter would not work

Ground Water and Seepage Indicators

Watercress ☐ Bank Seepage ☐
 Iron Staining ☐ None ☐
 Bubbling ☐ Water speedwell ☒
 Other ☐

Details:

Sparsely found in study area

Water Bodies Assessment Field Collection Form

Stream Morphology																		
Site Length (m): ~ 300 m		Bank Stability:																
Channel Dimensions		<table border="1" style="width: 100%; text-align: center;"> <tr> <td></td> <td>Stable</td> <td>Slightly unstable</td> <td>Moderately unstable</td> <td>Unstable</td> </tr> <tr> <td>Left Bank</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Right Bank</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> </table>			Stable	Slightly unstable	Moderately unstable	Unstable	Left Bank	☐	☒	☐	☐	Right Bank	☐	☒	☐	☐
	Stable	Slightly unstable	Moderately unstable	Unstable														
Left Bank	☐	☒	☐	☐														
Right Bank	☐	☒	☐	☐														
Mean Wetted Width (m): 1	Mean Wetted Depth (m): 0.20	Description: minor erosion in a couple areas banks well vegetated																
Mean Bankfull Width (m): 1.5	Mean Bankfull Depth (m): 0.50																	
Mean Top of Bank Width (m): 4.5	Mean Top of Bank Depth (m): 2.5																	
Flow Description: (high or low flow conditions, stagnant, etc) slow flow																		
Substrate (<=>)		Habitat																
Bo - Boulder Co - Cobble Gr - Gravel Sa - Sand Si - Silt Cl - Clay MK - Muck DT - Detritus		<table border="1" style="width: 100%; text-align: center;"> <tr> <th colspan="4">Morphological Structure (%)</th> </tr> <tr> <th>Pool</th> <th>Riffle</th> <th>Run</th> <th>Flat</th> </tr> <tr> <td>30</td> <td>20</td> <td>10</td> <td>40</td> </tr> </table>		Morphological Structure (%)				Pool	Riffle	Run	Flat	30	20	10	40			
Morphological Structure (%)																		
Pool	Riffle	Run	Flat															
30	20	10	40															
Description: Road to major bend * gr >> sa = si = cl = co cl >> gr > sa = si = co		Notes: riffle, run, pool sequence present - slight meander																
Instream Cover (%) 85																		
Other	Woody Debris	Boulders	Cobble															
7	/	/	7															
Aquatic Vegetation*		None	Undercut Banks															
70		/	Average Depth: 0.1 m (% Cover) 1%															
Note: Low = 0 - 30%; Moderate = 30 - 75%; High = 75 - 100%																		
*Aquatic Vegetation Species Present (algae, submergent, emergent etc.)																		
filamentous algae >>> grasses, cattail, rushes, water speedwell																		
Canopy Cover (% closed cover):		Types of Cover (% cover)																
100-90% ☐	30-1% ☐	Trees 10	Shrubs 80															
90-60% ☐	0% ☐	Grasses 10	Herbaceous															
60-30% ☒			Man-made structures Other															
Note: Low = 0 - 30%; Moderate = 30 - 60%; High = 60 - 100%																		
Notes: (vegetation species, types of structures)																		
Shrubs Willow, Hawthorn, White Cedar, Elms																		
Riparian Vegetation																		
Width of riparian vegetation: left + right - 1 m grasses, shrubs > trees																		
Description of vegetation community surrounding 30 m from watercourse:																		
agri crop fields																		
Obstructions to Fish Passage																		
No Obstructions ☒	Man-Made ☐	Natural ☐	Low Flow Barrier ☐															
Description of Barrier:																		
Height of Barrier (m)		GPS Coordinates:																

Water Bodies Assessment Field Collection Form

AECOM

Date: May 10/12

Land Parcel/Site ID: GSH 2046 ^{D12} 2126

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Other General Comments Regarding the Study Area:

- 30m up/s from rd appears to be similar watercourse
- watercourse is slightly meandering w/ ripple, run, pool sequence but very little erosion. Instream cover high (algae). Substrate gravel/sand, cl then moves to clay dominated.
- Restoration works have occurred recently by road and at major bend ~ 200m from road. Banks lined w/ boulders

Additional UTM Coordinates:

- schools of minnows and possibly a creek chub ~ 15cm in size
- GSH 2126 - channelized stream, 1.5m wide, well veg banks, little canopy cover, sunny, ~25m

Photo log

Picture #	Description	Picture #	Description
1-3	GSH 2126 - down stream		
4-14	Channel preview		
15	pool		
16	ripple		
17	Water speedwell		
18-21	Restoration works at bend		
22	moving upstream from restoration Substrate cl dominated		
23-25	Preview		
26-28	Preview		

Water Bodies Assessment Field Collection Form

AECOM

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Watercourse Sketch

Study Area:

Jericho

Goshen

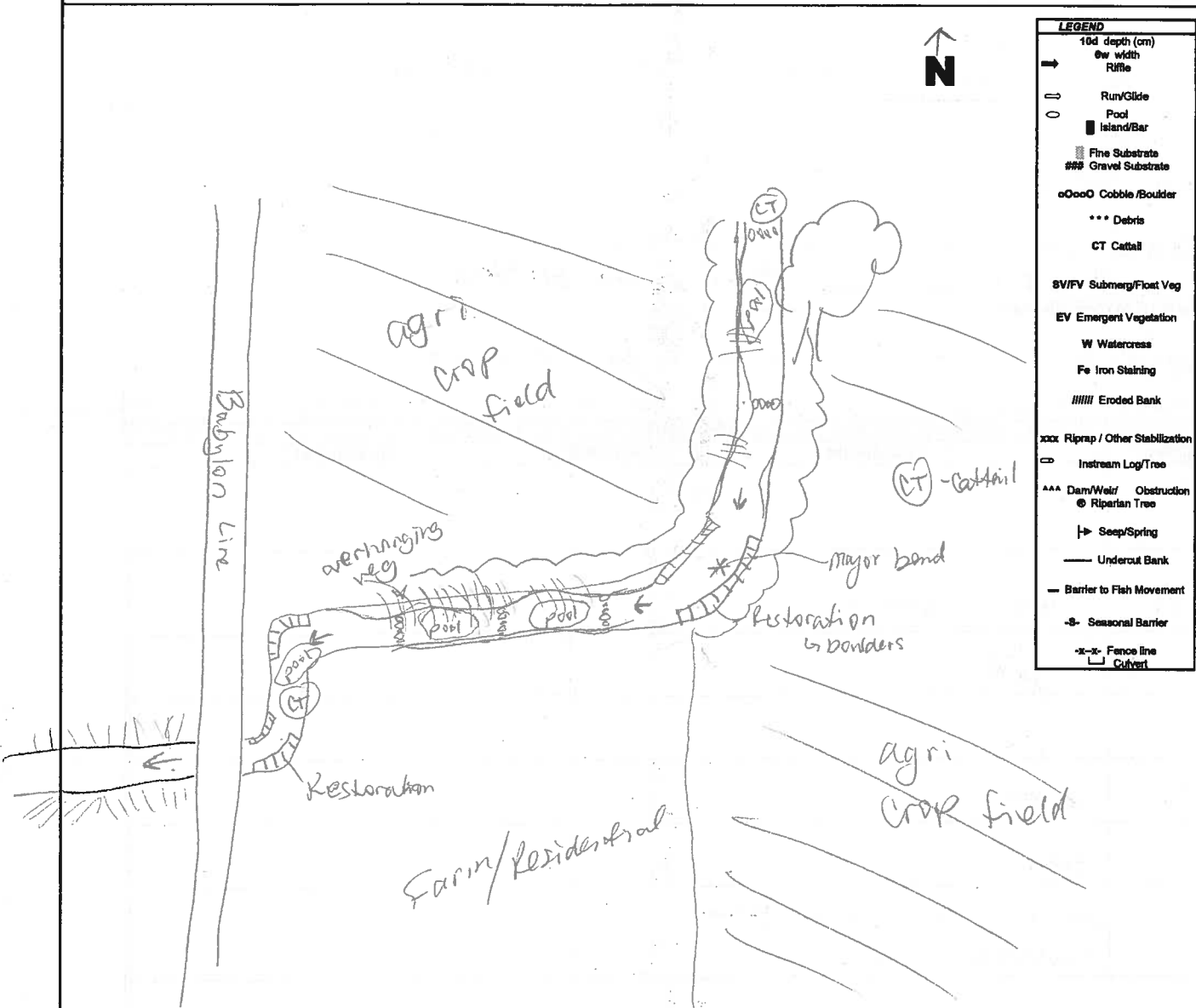
Bluewater

Land Parcel#

244612120

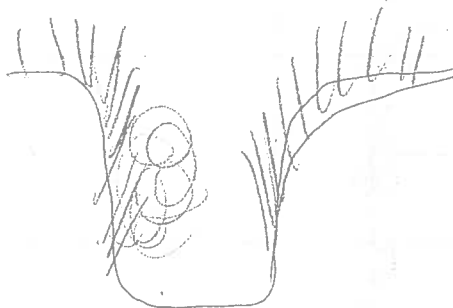
Site ID

D12



LEGEND	
10d depth (cm)	
0w width	
Riffle	→
Run/Glide	⇌
Pool	○
Island/Bar	■
Fine Substrate	
Gravel Substrate	###
Cobble/Boulder	oOooO
Debris	***
Cattail	CT
SV/FV Submerg/Floet Veg	SV/FV
EV Emergent Vegetation	EV
W Watercross	W
Fe Iron Staining	Fe
Eroded Bank	
Riprap / Other Stabilization	xxx
Instream Log/Tree	—
Dam/Weir Obstruction	AAA
Riparian Tree	⊙
Seep/Spring	⊥
Undercut Bank	—
Barrier to Fish Movement	—
Seasonal Barrier	-S-
Fence line	-X-X-
Culvert	⌊

Horizontal View of Channel



Initial QA/QC By:

L. Bentley

Date:

May 16, 2012

Technical QA/QC By:

J. Dutka

Date:

Jun 11/12

AECOM		Page 1 of 4	
		Field Crew: CAS	
General Information			
Study Area: Jericho <u>Goshen</u> Bluewater		Land Parcel# <u>2046, 2026</u> Turbine # <u>D 12</u>	
Date: <u>Jan 13, 2012</u>		Start time: <u>15:30</u> End Time: <u>18:00</u>	
Weather Conditions: <u>Snow</u>		Field Notes By: <u>CAS</u>	
Site Location			
<u>Babylon Line, south of Kirkton Rd.</u>			
UTM Co-ordinates			
Easting:	Northing:	Description: <u>GPS not working</u>	
Easting:	Northing:	Description:	
Easting:	Northing:	Description:	
Easting:	Northing:	Description:	
Surrounding Landuse/Pollution Sources		Type of Watercourse	
Residential ☒	Meadow ☐	Intermittent ☐	Channelized ☒
Agriculture ☒	Wetland ☐	Permanent ☒	Natural Channel ☐
Forest ☐	Livestock ☐	Ephemeral ☐	
Other:			
Notes: (Include any inputs into the system i.e. tile drainage, seepages, overland flow)			
<u>- tile drain input noted</u>			
In-Situ Water Quality		Ground Water Indicators	
WT (°C):	AT (°C):	Watercress ☐	Bank Seepage ☐
pH:	Cond (µ/cm):	Iron Staining ☐	None ☒
Water Clarity: Clear ☒	Turbid ☒	Bubbling ☐	Other ☐
Notes: <u>sl. turbid</u>			
Stream Morphology			
Site Length (m):		Bank Stability:	
Channel Dimensions			
Mean Wetted Width (m): <u>1.5</u>	Mean Bankfull Width (m): <u>/</u>	Stable	Slightly unstable
Mean Wetted Depth (m): <u>0.2</u>	Mean Bankfull Depth (m): <u>/</u>	Moderately unstable	Unstable
		Left Bank	☒ ☐ ☐ ☐
		Right Bank	☒ ☐ ☐ ☐
Flow Description: <u>good flow observed</u>			
Notes: <u>- could not assess bankfull dimensions due to snow</u>			

AECOM

Page 2 of 4

Stream Morphology (continued)

Substrate (<=>)

Bo - Boulder
Co - Cobble
Gr - Gravel
Sa - Sand
Si - Silt
Cl - Clay
MK - Muck
DT - Detritus
Other

Description

Sa, gr

Notes:

Morphological Structure (%)

Pool	Riffle	Run	Flat
		100	

Habitat

Instream Cover (%)

45

None	Woody Debris	Boulders	Cobble	Aquatic Vegetation*	Undercut Bank	Other:
				100		

*Aquatic Vegetation Types Present (algae, submergent, emergent etc.)

Canopy Cover (% closed cover):

100-90%



30-1%



90-80%



0%



60-30%



Types of Cover (% cover)

Trees

Shrubs

Man-made structures

Grasses

100

Herbaceous

Other

Notes:

Obstructions to Fish Passage

No Obstructions



Man-Made



Natural



Description:

Drainage Features within Study Area

Observations of Land Topography within 120 m buffer area:

- flat

Terrestrial features Present

Yes

No

Terrestrial Recon Form Filled out

Yes

No

AECOM

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Other General Comments Regarding the Study Area:

- Roadside Survey Completed.

Photo log

Picture #	Description	Picture #	Description
2282	East side		
2283	↓		
2284	West side		
2285	↓		

AECOM

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Watercourse Sketch

Study Area:

Jericho

Goshen

Bluewater

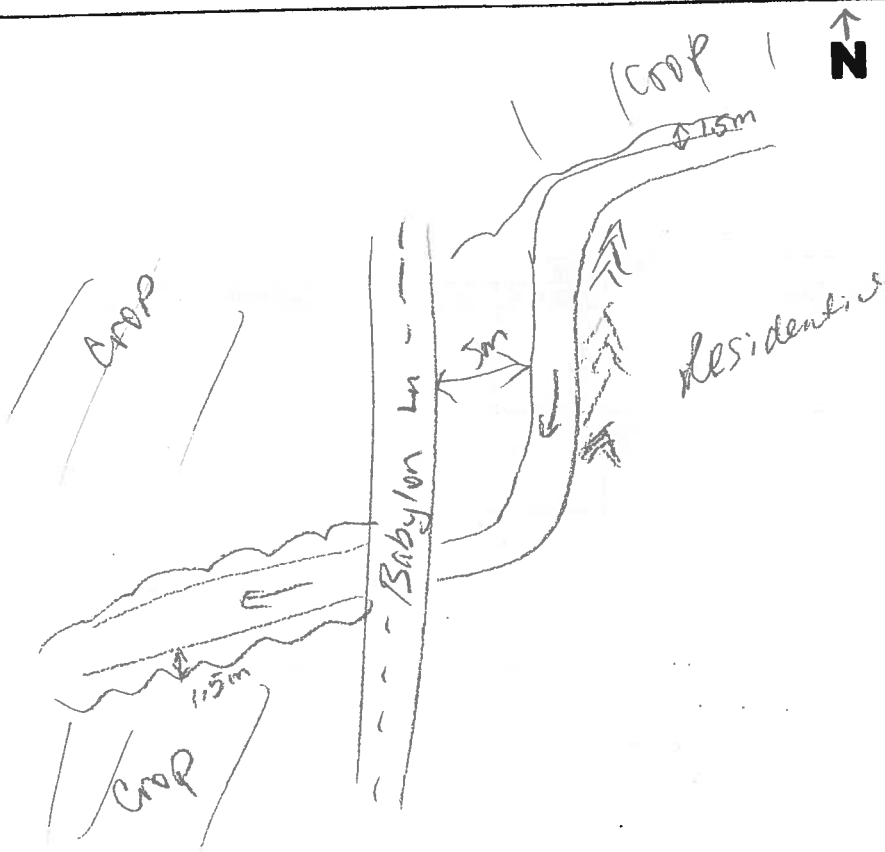
Land Parcel#

2046, 2126

Turbine #

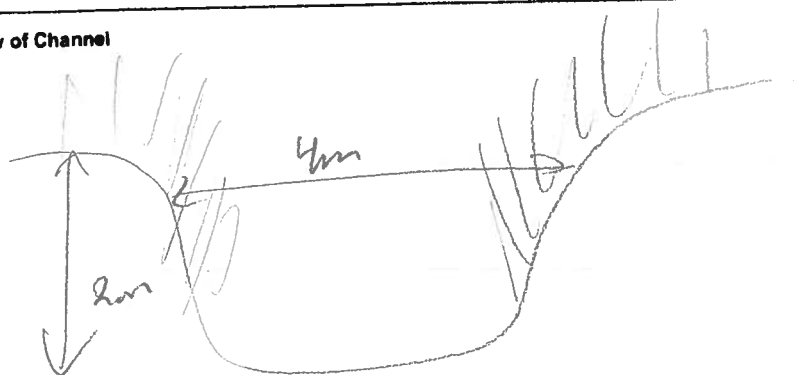
Site ID

D12



LEGEND	
100 depth (cm)	Sw width
---	Rifle
---	Run/Glide
○	Pool
■	Island/Bar
---	Fine Substrate
---	Gravel Substrate
oOooO	Cobble
●	Boulder
...	Debris
CT	Cattails
SV/FV	Submerge/Float Veg
EV	Emergent
W	Watercross
Fe	Iron Staining
	Eroded Bank
	Riprap / Other Stabilization
---	Stream Log/Tree
AAA	Dam/Weir
●	Riparian Tree
→	Seep/Spring
---	Undercut Bank
---	Barrier to Fish Movement
-B-	Seasonal Barrier
-x-x-	Fence line
---	Culvert

Horizontal View of Channel



Water Bodies Assessment Field Collection Form

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AECOM

General Information

Study Area: Jericho Goshen Bluewater Land Parcel# GSH 2119/2124 Site ID: D13

Date: April 18/12 Start time: 13:30 End Time: 14:00

Weather Conditions:

Sunny, 15°C

Field Crew: C. Boros, S. Lohres

Field Notes By: C. Boros

Site Location

Kirkton Rd, East of Goshen Line

* Roadside also completed for GSH 2124

UTM Co-ordinates (complete on page 3 if necessary)

Easting: 0452522 Northing: 4795806 Description: at culvert

Easting: Northing: Description:

Easting: Northing: Description:

Easting: Northing: Description:

Surrounding Landuse

Residential ☐ Meadow ☐
Agriculture ☒ Wetland ☐
Forest ☐ Livestock ☐
Other ☐

Description:

old corn fields

Type of Watercourse

Intermittent ☐ Channelized ☒
Permanent ☒ Natural Channel ☐
Ephemeral ☐

Description:

newly dug out

Notes: (include any inputs into the system i.e. tile drainage, seepages, overland flow)

tile drain observed

Is any portion of the water body underground or not as mapped? Y / N

If Yes describe:

GPS Coordinate: Easting -

Northing -

Description -

Description of Land Topography Surrounding Water Body (rolling hills, sloping towards water body)

flat

In-Situ Water Quality

WT (°C): 20 AT (°C): 15°C
pH: 8.34 Cond (µs/cm): 584
D.O. (mg/L) 11.78
Water Clarity: Clear ☒ Turbid ☐

Water Colour: none

Notes:

Ground Water and Seepage Indicators

Watercress ☐ Bank Seepage ☐
Iron Staining ☐ None ☒
Bubbling ☐
Other ☐

Details: