GENERAL INFORMATION

Authors	Institutions	Contacts [email]	Compiling date [DD/MM/YY]

Station description

Station name	Network code	Latitude [WGS84]	Longitude [WGS84]	Sensor depth [m]

Site characterization summary

Indicators				
fo +/- std [Hz]	Value		Quality index Qi1	
	References			
	URL of report			
Vs30 +/- std [m/]	Value		Quality index Qi1	
	References			
	URL of report			
Velocity profiles [YES/NO]	Value		Quality index Qi1	
	References			
	URL of report			
Surface geology [short description]	Value		Quality index Qi1	
	References			
	URL of report			
Site class EC8	Value		Quality index Qi1	
	References			
	URL of report			
Seismological bedrock depth +/- std [m]	Value		Quality index Qi1	
	References			
	URL of report			
Engineering bedrock depth +/- std [m]	Value		Quality index Qi1	
	References			
	URL of report			

Distance from the seismic station [m]		Final quality index (Final_QI)	Comments
min	min		

RESONANCE FREQUENCY

fo +/- STD [Hz]	
Quality index 1	

Source	Earthquake	☐	Ambient noise	☐

Ambient noise

Method	H/V	☐	Ellipticity	☐	Other	☐
fo +/- std [Hz]						

Experiment date [DD/MM/YY]	Distance from station [m]	Lat. [WGS84]	Lon. [WGS84]

Environment

Weather conditions	Sunny	Windy	Rain
Soil-sensor coupling	**Earth**	**Asphalt**	**Artificial**
Urbanization	**None**	**Dense**	**Scattered**

Equipment

Sensor	Type [acc/vel]	manufacturer	cut-off frequency [Hz]
Digitizer	**Type**	**Manufacturer**	**Sampling frequency [Hz]**
Measurement	**Number**	**Duration [min]**	

Analysis

Software	
Smoothing type (e.g. triangular, Konno-Ohmachi, ...)	**Window length [s]**

Fo uncertainty estimate from

Fo from individual windows	H/V curve width	Manual picking

Earthquake

Method	HVSR	☐	SSR	☐	GIT	☐	Other	☐
fo +/- std [Hz]								

Recording period [DD/MM/YY]		Number of earthquakes
from	to	

Epicentral distance [km]		Magnitude range	
from	to	from	to

HVSR

Seismic phase	P	S	Coda	S + coda	All

window duration [s]	Min	Max

SSR

Seismic phase	P	S	Coda	S + coda	All

Reference station	Lat. (WGS84)	Lon. (WGS84)

window duration [s]	Min	Max

GIT

Parameters	Free (to be inverted)	Imposed
Reference paper		
Reference stations	**Number of stations**	**Coordinates (WGS84) (lat., lon. of station 1; lat., lon. of station 2; ...; lat., lon. of station N)**

Cultrera G., Cornou C., Di Giulio G., Bard P.-Y. (2021). Indicators for site characterization at seismic station: recommendation from a dedicated survey. Bull Earthq Eng. https://doi.org/10.1007/s10518-021-01136-7

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SERA Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe

Vs30

Vs30 +/- STD [m/s]	
Quality index 1	

Source	Geophysical measurements		Geotechnical measurements		Geology		Digital Elevation Model (DEM)		DEM & Geology	

Geophysical measurements

Method	Surface waves methods (active, passive methods)		Borehole methods (DH, CH, PS-Logging)	
Vs30 +/- STD [m/s]	From Vs(z)		From Down-Hole	
	From Vr40* * Rayleigh phase velocity at 40 m wavelength		From Cross-Hole	
	From Vsz-Vs30 correlation		From PS Logging	
Reference relationship Vsz - Vs30				

Geotechnical measurements

Method	N-SPT		CPT		Shear strength		OTHER	
Vs30 +/- STD [m/s]								

Experiment date [DD/MM/YY]	Distance from station [m]	Lat. [WGS84]	Lon. [WGS84]

Reference relationship Vs30-geotechnical parameter	
N-SPT	
CPT	
Shear strength	
Other	

Geology

Method	Geological map		Stratigraphic log	
Vs30 +/- STD [m/s]				

Geological map scale	
Geological unit name	

Stratigraphic log	Experiment date [DD/MM/YY]	Lat. [WGS84]	Lon. [WGS84]

Reference relationship Vs30-geology	
Reference relationship Vs30-Stratigraphic log	

Digital Elevation Model

Vs30 +/- STD [m/s]				
DEM resolution		Slope range (degree)	from	
			to	
Reference relationship Slope - Vs30				

DEM & Geology

Vs30 +/- STD [m/s]	
Reference relationship Slope - Vs30 - geology	

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Vs profile

Quality index 1	

Source	Non-invasive methods (active and/or passive seismics)				Invasive methods (measurement in borehole)	
	Active surface waves		Refraction		Cross-hole / Down-hole	
	Passive surface waves		Reflection		Geotechnical methods (CPT, SPT, ...)	
	HV / ellipticity				PS-Logging	

Non-invasive : surface waves methods

Experiment date [DD/MM/YY]	Distance from station [m]		Lat. [WGS84] center location	Lon. [WGS84] center location
	Min	Max		

Active surface waves acquisition layout

Minimum receiver spacing (m)	
Profile length (m)*	
Geophones number	
Number of profiles	

** Provide the length for the various profiles (e.g. 46 m, 94 m)*

Geophone cut-off frequency (Hz)	
Geophone type (vertical / horizontal)	
Geophone manufacturer	
Source (hammer, vibrator, ...)	
Digitizer type	
Digitizer manufacturer	

Weather conditions	Sunny	Windy	Rain	Soil-sensor coupling	Earth	Asphalt	Artificial	Urbanization	None	Dense	Scattered

Passive surface waves acquisition layout

Number of sensors	
Minimum array aperture	
Maximum array aperture	
Number of arrays	
Minimum duration [min]	

Sensor cut-off frequency (Hz)	
Sensor type (vertical / horizontal)	
Sensor manufacturer	
Digitizer type	
Digitizer manufacturer	

Weather conditions	Sunny	Windy	Rain	Soil-sensor coupling	Earth	Asphalt	Artificial	Urbanization	None	Dense	Scattered

Type of dispersion and/or H/V estimates

		Reference paper (Name, Journal, DOI)
Rayleigh DC		
Love DC		
Ellipticity		
H/V (DFA, EHVR)*		
H/V (SH)*		

** DFA: Diffuse wavefield approach; EHVR: H/V of earthquakes; SH: SH transfer function*

Dispersion curves

	Rayleigh	*Love*
Min wavelength (m)		
Max. wavelength (m)		
Min. phase vel. (m/s)		
Max. phase vel. (m/s)		
Modes (R0, L0, ...)		

H/V or Ellipticity curves

Min. frequency (Hz)	Max. frequency (Hz)

Inversion

Rayleigh waves		Love waves		Ellipticity curves		H/V (DFA, EHVR)		H/V (SH)		resonance frequency	

A priori information used in inversion		seismic refraction		stratigraphic log		geotechnical information		water table depth	

Inversion algorithm/code	
Reference	

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Non-invasive : body waves methods

Experiment date [DD/MM/YY]	Distance from station [m]		Lat. [WGS84] center location	Lon. [WGS84] center location
	Min	Max		

Acquisition layout

Receiver spacing (m)	
Profile length (m)*	
Geophones number	
Number of profiles	
Shot spacing (m) - reflection meas.	

Geophone cut-off frequency (Hz)	
Geophone type (vertical / horizontal)	
Geophone manufacturer	
Source (hammer, vibrator, ...)	
Digitizer type	
Digitizer manufacturer	

** Provide the length for the various profiles (e.g. 46 m, 94 m)*

Weather conditions	Sunny	Windy	Rain	Soil-sensor coupling	Earth	Asphalt	Artificial	Urbanization	None	Dense	Scattered

Processing methods

		Reference paper (Name, Journal, DOI)
classical refraction		
refraction tomography		
classical reflection		
advanced method		

Invasive methods

	Down-Hole	Cross-Hole	PS-Logging	SPT	CPT	OTHER
Borehole depth (m)						
Geophone type						
Source type						
Distance between wells						
Depth resolution (m)						
Latitude (WGS84)						
Longitude (WGS84)						
Distance from station (m)						
P-wave velocity (if yes, check)						
S-wave velocity (if yes, check)						

Processing methods

		Reference paper (Name, Journal, DOI) or ASTM norm
Down-Hole		
Cross-Hole		
PS-Logging		
SPT		
CPT		
OTHER		

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Authoritative velocity profile

Note: You do not have to fill in all the columns. You can provide either single values for Vp or Vs (e.g. profiles derived from borehole measurements) or either a range for Vp and Vs (e.g. profiles derived from stochastic surface waves inversion)

Is Vs derived from Vp ?	**Yes**	☐	**No**	☐

Is Vp derived from Vs ?	**Yes**	☐	**No**	☐

Top depth (m)	Bottom depth (m)	Vp (m/s)	STD Vp (m/s)	Vs (m/s)	STD Vs (m/s)

Vs range		Vp range	
Vs min (m/s)	Vs max (m/s)	Vp min (m/s)	Vp max (m/s)

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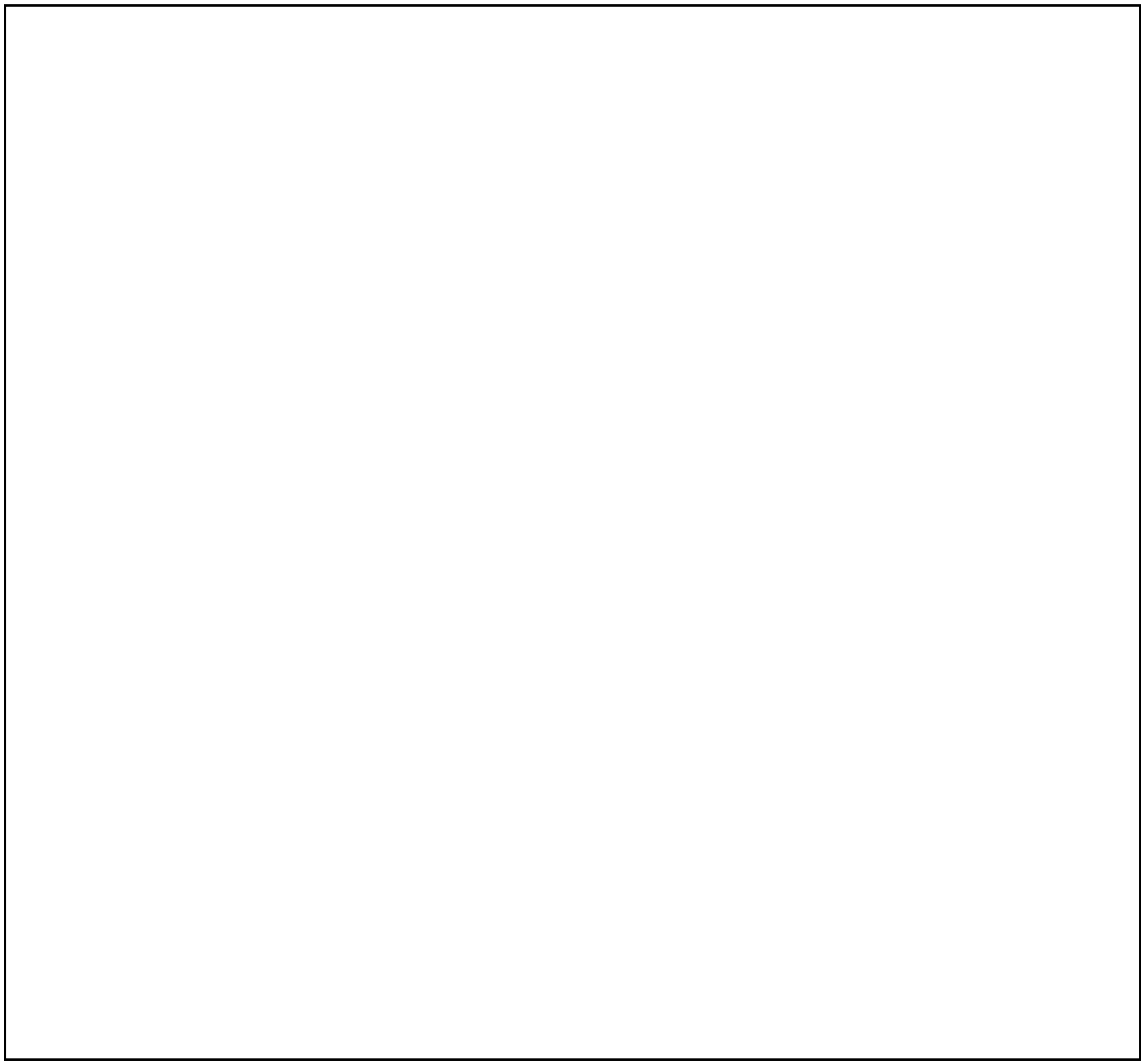
Figure with authoritative velocity profiles



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Surface geology

Quality index 1	

Source	Cartography (geological, lithological, ...)		Field survey		Stratigraphic log	

Geological map

Map reference		
Map scale		
Map sheet		
Predominant geologic/lithologic unit	Name :	
	Description :	
	Age :	
	Thickness :	
	Rock mass structure :	
Fault presence		
Weathering		
Cross-section		

Field survey

Map reference		
Map scale		
Predominant geologic/lithologic unit	Name :	
	Description :	
	Age :	
	Thickness :	
	Rock mass structure :	
Fault presence		
Weathering		
Cross-section		

Stratigraphic log

Distance from station (m)	
log depth (m)	

Top depth (m)	Bottom depth (m)	Stratigraphic description

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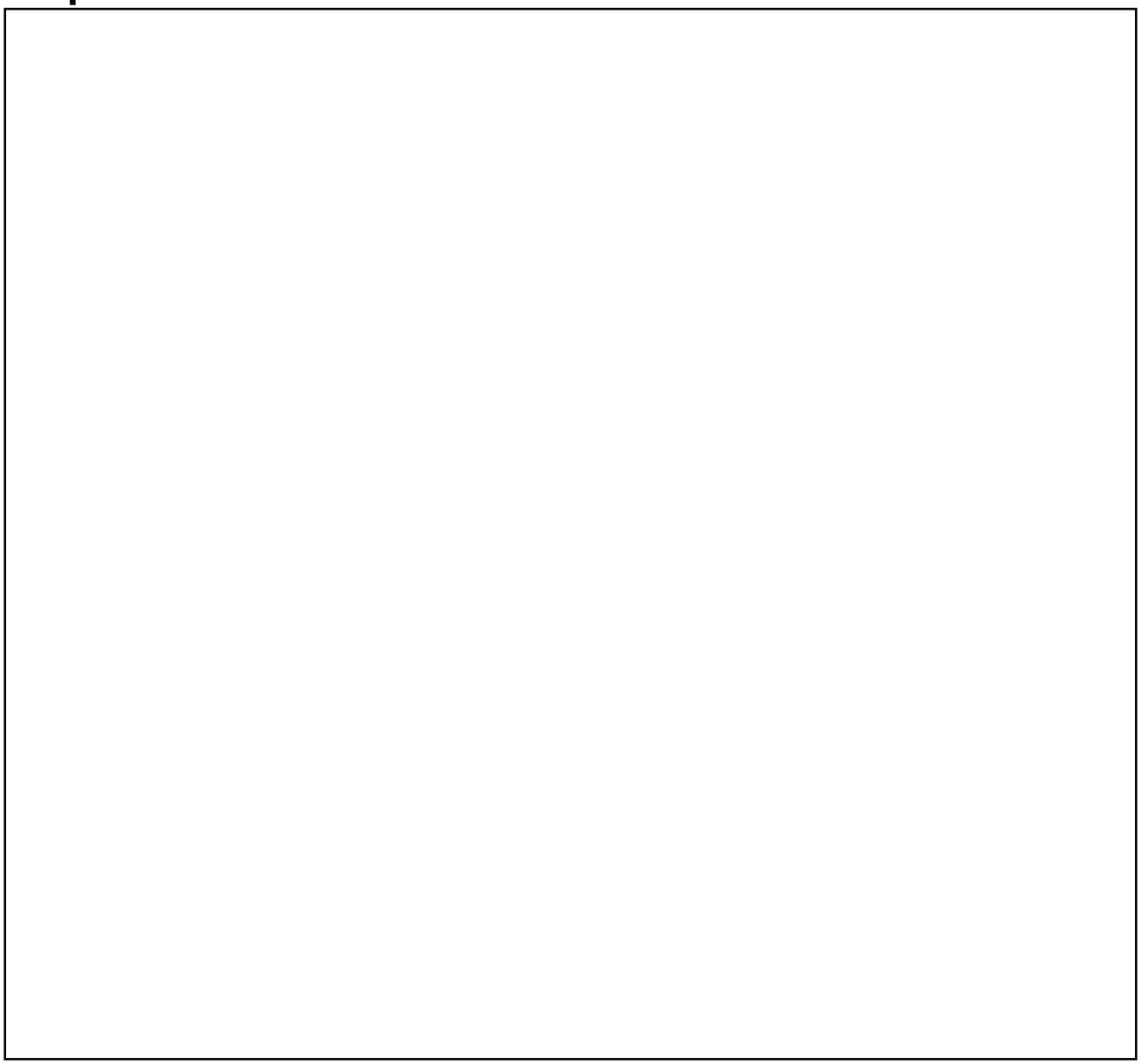
Surface geology

Map



Site class

Site class	
Quality index 1	

Reference building code for site classification (EC8-1, EC8-2, NEHRP, national code, ...)	

Source	Geophysical measurements		Geotechnical measurements		Digital Elevation Model (DEM)		Geology		DEM & Geology	

Reference relationship geology - site class	
Reference relationship slope from DEM - site class	
Reference relationship slope from DEM - geology - site class	

Parameters for deriving site class as prescribed in building code	

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Seismological bedrock depth

Depth +/- STD [m]	
Quality index 1	

Source						
	Vs profiles		**Geology**		**Other (gravity, seismic refraction, TDEM*, ...)**	
	Resonance frequency		**Stratigraphic log**			

** Time-Domain Electromagnetic Methods*

	Non-invasive methods	**Invasive seismic methods**	**Geotechnical methods**
Bedrock depth +/- STD(m)			
Bedrock Vs +/- STD(m)			
Bedrock Vp +/- STD(m)			
Is Vs derived from Vp ?	**Yes**	**No**	

Resonance frequency

Bedrock depth +/- STD(m)	
Reference relationship Fo - bedrock depth	

Geology

Bedrock depth +/- STD(m)	
Bedrock geological unit	
Reference	

Stratigraphic log

Bedrock depth +/- STD(m)	
Bedrock geological unit	
Reference	

Other methods

	Bedrock depth +/- STD(m)	**Reference**
Gravity		
Seismic refraction		
Seismic reflection		
TDEM		

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Engineering bedrock depth

Depth +/- STD [m]	
Quality index 1	

Reference Vs related to engineering bedrock in m/s		Reference building code for site classification (EC8-1, EC8-2, NEHRP, national code, ...)	

Source	Vs profile		Geology		Stratigraphic log	

Vs profile

	Non-invasive methods	Invasive seismic methods	Geotechnical methods
Bedrock depth +/- STD(m)			

Is Vs derived from Vp ?	Yes		No	

Geology

Bedrock depth +/- STD(m)	
Bedrock geological unit	
Reference	

Stratigraphic log

Bedrock depth +/- STD(m)	
Bedrock geological unit	
Reference	

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